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THE

CANADA LANCET

A MONTHLY JOURNAL

—OF—

MEDICAL AND SURGICAL SCIENCE,

CRITICISM AND NEWS.

EDITED BY

J. L. DAVISON, B.A., M.D., C.M., M.R.C.S., E.
CHARLES SHEARD, M.D., C.M., M.R.C.S., E.

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CORTICAL EPILEPSY—A CLINICAL LECTURE.

BY DAVID INGLIS, M.D.

Professor of Mental and Nervous Diseases, Detroit College of Medicine. Member American Neurolgical Association.

(Continued from August Number.)

You see then, gentlemen, that a case of cortical epilepsy serves as a pathological experiment. We demonstrate the fact of special cerebral centres, and it serves also as a physiological experiment to explain in part the mode of action of the brain matter. It is by such uses that we get the real value of strange phenomena. Leaving these general, but by no means secondary considerations, and confining our thoughts more particularly to the special points about cortical epilepsy, we ask first in regard to its causation. The causes may be grouped into two classes: 1st, those to which I have already alluded as located in distant parts of the body, commonly called reflex; let me reiterate that you should in every case search diligently for these, bearing in mind both the fact that the irritant point may be located in the most unlikely place, and at the same time the irritation may be so slight as to give little notice of its particular location. Hence you must search, for instance, the entire length of the alimentary canal. Delayed or irregular, or even simple dentition, irritants in the stomach or bowels, or perhaps an anal fissure, any of these may be sufficient to cause the cerebral trouble. In like manner you must make a complete examination of the generative organs. By the way, I mean in males as well as females. The medical profession runs so much to gynæcology, that the male sexual organs are oft-times neglected. The prepuce, especially in children, must never be overlooked, and I have become satisfied that quite a number of obscure cases of nervous disturbance depend upon abnormal conditions of the testicles. A varicocele causes but very trifling distress, yet I am certain that many cases of marked nervous depression are due to nothing else. I cannot go into detail further, but am reminded of that grand old teacher, Professor Traube, of Berlin.

He used stoutly to maintain that to make a proper diagnosis, we should make a complete physical examination of our patient from the top of his head to the soles of his feet, not figuratively, but actually. Indeed he used to compel us to make a diagnosis of a case before the class in that manner. We had to make a diagnosis, as the advertisements for the recovery of stolen goods sometimes read, "No questions asked." And the wisdom of his advice every old practitioner knows. For instance, none of your patients will ever voluntarily complain to you of her high-heeled shoes, but you may not infrequently cure a lame back of long standing by cutting down the heel. Patients will not think so lightly of you as to so much as mention such an ignoble thing as a "corn," but you need to search even for corns.

The second class of causes of cortical epilepsy are those which directly affect the nutrition of the brain substance. It would lead too far to enter to-day upon the subject of the nutrition of nervous matter; let me only say that a large and important class of nervous diseases are what we term functional. By that we simply mean that a *post-mortem* examiuation reveals no change in the brain substance which is visible either to the naked eye or with the aid of the microscope.

Mentally, we cannot conceive that there is no change in the brain cells, but we are obliged to believe that the processes of nutrition in the cells are in some way affected, even if we cannot see evidences of the change. Still it remains true, that the causes of nervous disorders, such as cortical epilepsy are, thus sometimes nutritional or, as it isoften called, molecular.

In other cases we find a certain area of the cortex visibly affected by lesions within the cranium. The cause may be traumatic, and this is by no means rare.

Here again you will be compelled to search diligently, for patients often forget an injury long

past, not realizing that slowly increasing patholo gical changes may follow an injury at a late date.

Traumatisms may be either in the nature of fracture with depression or an immediate hæmorrhage within the skull, or, and this is by no means uncommon, the injury may set up slow inflammatory processes in the membranes, or a thickening of the skull, or the formation of a thorn of bone. These processes may, by pressure or congestion, set up the irritation which results in the epileptic explosion. They very commonly, however, act by shutting off the circulation to a certain extent. If you will recall your anatomy you will remember that the cortical substance of the hemispheres receives its nutrition by means of a vast number of minute short arterioles which penetrate from the pia mater for a distance not much greater than just the thickness of the cortical substance. If now a slow inflammatory process (with its usual result of a deposit of new connective tissue) takes place in the pia mater the induration which finally occurs in the new tissue, shuts off materially the free flow of blood to the cortex. In this way one can easily understand why it is that the symptoms follow not always immediately, but often after the lapse of a considerable time after the injury, hæmorrhage or other exciting cause. Another cause of cortical epilepsy deserves mention particularly, that is sunstroke. This cause is apt to be overlooked because the subject does not always have a history of being totally overcome by the heat. Quite often it is only by special questioning that you will learn that the patient has been to a greater or less extent affected by intense heat, and yet I am certain that a sunstroke, even a partial one, may set up lasting changes in the cerebral, more particularly the cortical circulation. The fact sometimes brought up in objection to this conception, to wit, that the *post-mortem* examination shows no adequate change, can be answered by this. Varicose veins of the leg, even of great extent, disappear at death. At the *post-mortem* you may find a chronic ulcer, while the varicose veins which caused the stagnation and starvation, resulting in the ulcer, may not show at all. So, too, permanent dilatation of the superficial vessels of the cortex, with the consequent slowing of the blood stream and resulting impairment of nutrition, can readily disappear after death. Besides these local causes, I must mention general causes, such as the various constitutional infections, especially syphilis and tubercolosis; also causes which tend to marked anæmia, as for instance, severe hæmorrhage.

Again, we must not omit to look for various toxic disorders, notably uræmic poisoning. Do not forget that this search for causation is not an idle curiosity, but that often the removal of some such cause, when it has been found, may lead to the restoration of your patient.

In the case which we present to-day, the cause seems to lie very clearly before us. A severe blow upon the left side of the head is followed, after an interval of about four months, by a cortical epilepsy which is very distinctly localized as originating in the ascending frontal and parietal convolutions of the same side. But again I must warn you not to hastily accept even such a clear case as this. It is the universal tendency to take easy and short views, but if you neglect to loook farther than the surface phenomena, you will often fall into grave errors. For instance, in this case, you attribute the epilepsy to the blow, to a pachymeningitis consequent upon it; but what bearing upon the case then do you attribute to the profuse hæmorrhage at the time of her miscarriage; to the fact that it was at the next menstrual period following that the seizures first began, that the next seizure then occurred at the next menstrual period? Again, let us not forget that from about the time that the second seizure occurred she has had a pretty continuous headache, not upon the left, but on the right side; also, that since September 8th she has had a paresis of the right abducens. You have said nothing about the nervous wear and tear of a wretched married life, nor of the using up of vital force involved in her frequent child-bearing and miscarriages. You see, gentlemen, the thing is not simple after all. Not to delay too long over this point, I will simply say that the striking limitation of the convulsions leads me to believe that only a small area of the cortex is involved, and that while the causes last mentioned have probably all had their share in getting her ready, that I think it altogether probable that the blow at Christmas was the factor which determined the localization.

PROGNOSIS AND TREATMENT.

These points can, very conveniently, be taken up together, because the one depends so closely

upon the other. In very many of the diseases which you will be called upon to treat, the general tendency is so distinctly toward a natural cure, that you can make a prognosis which does not depend upon treatment; but in the case of epilepsy, the tendency is in general markedly in the other direction. A case of localized epilepsy is likely to continue, indeed it is likely to involve a constantly increasing area, so that what is, at first, only a curious and seemingly slight motor disturbance, tends to approach in character the more severe form of general epilepsy. This, in turn, involves the possibility of mental deterioration. Here the expectant plan of treatment is never justifiable. Indeed, so marked is this tendency to the establishment of a convulsive habit, that you ought to use the utmost promptitude in your treatment.

A case may, for instance, occur in which the most distinct relationship can be traced between some local irritant and the convulsive seizures. Can you *promise* your patient that upon the removal of the cause the convulsions will cease? No; for unfortunately the cortical mechanism may have set up the habit of periodical tempestuous discharges. It is a good deal like a horse which has always been a steady driver, if from sudden fright he runs away once, you need to watch him; but if he runs away a second time you had better sell him, for the probability is very strong that he will ultimately break your bones. The longer the exciting cause is allowed to act the greater the liability that, even when you succeed in removing the, cause the convulsions may still continue. It becomes evident then that that part of the treatment which consists in the removal of the cause is an important one, not to be too long neglected. I cannot forbear to caution you however, even while I urge you to prompt and decisive action. Seek diligently for any exciting cause and remove it, if possible, early. In many instances you will do well to remove some abnormal condition even if you are by no means certain that it is the exciting cause—for instance, an elongated prepuce can be removed, or some abnormal teeth, or similar conditions rectified to the general good of the patient. even if not surely affecting his special symptoms. But my caution is this, that you do not perform any of the graver operations, such as removal of an ovary or opening of the skull, on such insufficient grounds. You may think such a caution quite needless, but there is a painful suspicion in the minds of the profession that some zealous surgeons have removed ovaries for conditions which a thorough course of medication and hygienic treatment might have cured quite as successfully and with much happier outcome. To the zealous among you therefore, I commend the plan of judging carefully and before resorting to severe measures to try faithfully the milder ones. To the conservative among you I warn you against too long delay. If after thorough medicinal and hygienic treatment you find your patient's condition unimproved, then in view of the probable end of a case of epilepsy, we are certainly justified in performing even grave operations if they hold out a reasonable promise of help. If then the source of irritation seems to be in the ovaries, their removal is justifiable, and that too even if their removal does not successfully relieve the epilepsy. We are charged simply to do the best we can. This brings us to the subject of

TREPHINING FOR EPILEPSY.

It is but a few years since the operation of opening the skull was looked upon as one of the most serious of surgical procedures, and I find that that feeling has, by no means, been generally changed. The great mass of the members of our profession remains always conservative, and wisely so. Changes in methods of procedure are very slowly adopted. Hence it is that the practice of antiseptic surgery has, in spite of the marvellous results already achieved, not yet been generally adopted. Neyertheless, it remains a fact that the practice of antiseptic surgery has entirely changed the estimate put upon the dangers of trephining. If antiseptic surgery had accomplished nothing more it would still be glory enough that it has opened up the possibilities of cranial surgery. The consideration of the methods, precautions and limitations of cerebral surgery it is not in my province to discuss with you. Let me simply introduce the subject to your attention and further consideration, and give again a caution. You, gentlemen, will enter upon your professional work free from the conservative bias which unavoidably hampers many of those who have been in practice for many years. Your greatest danger lies in too great rashness. Remember the old saw, that

"fools rush in where angels fear to tread," and while you go out prepared to carry out the results of the latest progress in medicine and surgery, carry with you a determination to use careful judgment.

In this matter of cortical epilepsy, the operation of trephining has already accomplished certain definite results, and the next few years will probably add to the accuracy with which successful results can be achieved.

At present we may consider the following points as established :

1st. That the operation is a legitimate one. It is however to be presumed that this, like any other of the graver surgical operations, ought not to be done until the failure of less dangerous methods and the severity of the case renders further action necessary.

2nd. That the operation should not be done unless the patient presents symptoms which, with a reasonable degree of certainty, point to the locality of the initial point of discharge.

3rd. That the operation is most likely to prove successful in cases due to the presence on or near a cortical area of something which acts as a foreign body. This may be a depressed portion of the skull, a spicula of bone, a localized thickening of the skull or membranes, a blood-clot or some neoplasm.

4th. That in case the operation reveals no organic or removable lesion, it is still justifiable to remove a portion of the cortical substance. Such a procedure brings about a corresponding loss of motor power, but even in case the paralysis thus produced remains permanent, it is nevertheless better for a patient to go about with a partial paralysis, rather than with a convulsive disorder which tends, ultimately, toward dementia.

As with the removal of reflex causes, so with the removal of intracranial causes ; bear in mind that your prognosis, as to the result of operation, must be guarded, for the epileptic "habit" may still continue.

I have thus, gentlemen, utilized this patient as a text for some of the considerations bearing on cortical epilepsy. There remain still other points of interest, which we must leave for the present, for instance, the matter of non-surgical treatment. Let me simply say that while medicinal treatment seems, for the present, to control the frequency of the seizures of our patient, and we consequently delay any operative interference, that with such a history and such a definite group of localizing symptoms, if our patient gives evidence of progressive cerebral disorder, I shall advise the operation with great confidence in its affording help.

21 State St., Detroit Mich.

A PLEA FOR ELECTRICITY IN MEDICINE.*

BY DR. C. R. DICKSON, TORONTO.

That the subject of electricity is not well understood by the mass of general practitioners none will deny ; that it does not occupy the position in therapeutics it deserves many will question ; that its field of usefulness may be greatly enlarged, and that it may be relied upon to act with reasonable certainty many doubt and will continue to doubt. Why should this be so ? The answer is plain. Our profession is one in which haste is made slowly—often very slowly—and perhaps it is better that caution should mark our path, at least, safer for our patients.

Where are we to learn the fundamental principles of this agent that has been until recently enshrouded in such a cloud of mysticism ? The instruction given in our colleges is most meagre in this direction, and patient study in books, all of which are most disappointing, often assuming an acquaintance with the subject which they are trying to teach, proves very irksome ; and experiment, the best method of all, takes much time and means, neither of which can well be spared by the majority of us ; and so a faradic machine is purchased and a book of instructions, and "fools rush in where angels fear to tread." All goes well and the new broom sweeps clean, but the application takes up too much time, and finally the faradic machine is left in charge of the patient, who allows the zinc element to remain in the fluid all the time perhaps, and when the battery arrives home it may be a thing of beauty still, but by no means is it a joy, but rather a decided vexation, and finally is sent to the instrument-maker for repairs. This process is repeated until at last the unfortunate article is one day thrust aside to

*Read before the Ontario Medical Association, July, 1889.

accumulate the dust of ages, and electricity voted a failure. Or, perchance, our practitioner is more aspiring and a galvanic battery is purchased; but it would take too long to even imagine all the mishaps that may befall it, as it was formerly constructed with a view to getting out of order with the greatest facility on the slightest provocation, and in that respect was a marvel of perfection. Even machines of recent construction leave much to be desired, and in secondary batteries which promised so much we have been greatly disappointed. Whether the Gassner dry cell will prove satisfactory, remains yet to be seen. The foregoing is not exaggerated in any respect. Another source of trouble is a very dirty sponge, which when removed from its metal electrode displays a fine illustration of the process of oxidation, a process which electricity encourages to give it an excuse for not working. No wonder that disappointment attends such labors.

But look with me on the other side, for every cloud has its silvery lining. The man in this case is fortunate in having obtained a knowledge of the chemistry and construction of batteries, and careful reading and patient experiment have extended his acquaintance. He courted electricity, and though at first she played the coy maiden and made fun of his efforts, at last he won, and now they are firm friends; and while he keeps her house well stored and the path bright and clean, she will walk or run in it at his bidding, in her own mysterious fashion. And where will he find her scatter her sunshine most freely? In the haunts of pain will her work be most apparent. Neuralgia will flee when she comes, be it supra-orbital, infra-orbital, intercostal, epigastric or ovarian, and even that major form, sciatica, acknowledges her rule, and headache, in the majority of its varities, also owns her sway. The same applies to many forms of rheumatism. Even the pangs of that dread foe, angina pectoris, may in many instances be alleviated.

But she is not content with merely the relief of pain, for her work is also curative. Her wonderful power of exciting absorption may often be utilized with telling effect in chronic articular rheumatism, as also, in the treatment of indolent ulcers. The action of electricity upon the sympathetic system is productive of the most satisfactory results in goitre, and promises much in the direction of treatment of such hitherto intractable diseases as diabetes mellitus, while it would account for its power over indigestion, dyspepsia, and that every prevalent complaint, constipation. Nasal catarrh and several forms of skin disease are frequently amenable to this treatment. In the field denoted by that convenient though vague term, neurasthenia, as might be easily imagined capital results will follow the use of electricity, and in that rare disease para-myoclonus-multiplex, it is also of value.

The preceding observations apply mainly to galvanism. I will barely allude to the use of electricity in the many forms of paralysis, as to do more would materially lengthen a paper which it is my desire to keep as short as possible, and here its use has been more frequent.

And now a few words as to the faradic current. Perhaps the quickest results from its use will be experienced in hypochondriasis and hysteria, in both of which diseases it may be combined with advantage with the galvanic current. The power of faradism to excite muscular contractions and thereby increase muscular nutrition may be taken advantage of in the treatment of phthisis, where the accessory muscles of respiration may be strengthened by its use, and much comfort given thereby.

In aphonia, whither hysterical or not, its use is attended with speedy and beneficial results if there is no organic lesion present. In disorders of the alimentary canal dependent upon lack of muscular tone, its use is productive of good results.

I have by no means exhausted the list of diseases in which electricity, galvanic or faradic, has proved palliative or restorative in my own practical experience; nor have I laid down the special line of procedure to be adopted in each case, as to do either would occupy the time of this Society. It also leaves the field open for discussion should such be desired. My object is to excite a greater interest and stimulate investigation in a rather neglected though prolific branch of therapeutics.

NEW CHAIR FOR A MEDICAL UNIVERSITY.—Dr. Charles F. Stillman, author of a recent work on Life Insurance Examinations, has lately been appointed to the Chair of Physical Examination for Life Insurance, lately established in the University of Vermont.

VAGINAL HYSTERECTOMY WITH ABDOMINAL OVARIOTOMY.*

BY A. GROVES, M.D., FERGUS, ONT.

In bringing this case before you, I do so with the hope that it may in some degree, however slight, influence others to advise or adopt operative treatment in the early stages of malignant disease of the uterus. Whether the disease be limited to the os and cervix, or involve the body of the organ, complete ablation, to my mind, offers the best prospect of a permanent cure. It must be admitted that vaginal hysterectomy is a serious and difficult operation, not lightly to be undertaken; but one who has, and wo has not, witnessed, the terrible ravages of uterine cancer, will agree that any operation, however difficult, is worthy of consideration when the only alternative is death in one of its most miserable and loathsome forms. It is hard to imagine any condition better calculated to excite pity, than that of a woman in the last stages of malignant uterine disease. The nights of agony and days of pain which drugs barely alleviate, the horribly offensive odor arising from putrid discharges mingled, it may be, with urine and fæces, for perforations of the bladder and rectum are by no means unheard-of complications, the burning excoriations bathed in acrid matter—all go to form a picture too well known, and for the cure of which, up to recent years, science had nothing to offer. If, then, this case should tend to influence you in favor of attempting the radical cure of uterine cancer or sarcoma, I shall feel that I have not wholly wasted your time.

On the fourth of last May I first saw the patient whose case I bring before you. I found a lady 69 years of age, the mother of several children, and who had enjoyed good health up to about sixteen months since, when, as she expressed it, "her changes returned," and the discharge of blood was more or less constant until the time of my visit. Latterly it had become quite profuse at times, and there was also a considerable discharge of badly smelling pus. She was quite pallid and was rapidly losing flesh and strength. On making an examination I found the uterus enlarged so that a sound passed easily five inches and its withdrawal was followed by free hæmorrage. Low down in the abdominal cavity a tumor was easily made out, slightly to the left of the median line. It was not clear that this was separate from the uterus, for every movement of the one caused a corresponding motion of the other; but seeing that small ovarian tumors with short pedicles are sometimes differentiated with difficulty from uterine tumors, I left the exact nature of this an open question. My diagnosis was malignant disease of the uterus, with possibly a small ovarian tumor, and I advised operative treatment as holding out the only chance of recovery. On the 7th of May, Dr. Rogers, my partner, saw her with me and agreed as to the diagnosis and also as to the advisability of an operation. Accordingly, on the morning of May 8th, I operated with the assistance of Drs. Mennie, Rogers and Millican. The patient having been chloroformed, the uterus was drawn down as low as possible and a ligature passed through the cervix, by means of which forceps and tenacula could be dispensed with. The uterine cavity was thoroughly washed out, in order to remove all pus and prevent the escape of septic matter into the peritoneal cavity at a subseqnent stage of the operation. Having incised the mucous membrane around the cervix and separated the uterus from the bladder, the peritoneal cavity was opened through Douglas' cul-de-sac, and on passing my fingers up over the fundus an ovarian tumor was found, which it was decided to remove by abdominal incision. The abdomen was immediately opened in the ordinary manner and the tumor, which was about six inches in diameter and semi-solid, removed without difficulty. Placing a sponge in the abdominal wound, I brought down the fundus of the uterus to the vulva, ligatured the broad ligaments and separated the uterus from its attachments. There being no oozing of blood the abdominal wound was sutured, and a couple of stitches put in the vaginal wound also. A drainage-tube was left in vagina and a catheter in the bladder. Th re-action was given and she vomited only onc Evening temperature 99½; slept considerably dur ing the night, and had a temperature of 99 nex morning, which in the afternoon went up to 100¼ Slight discharge from drainage tube, little or n pain, considerable thirst. Third day: morning.

* Read before the Ontario Medical Association, June, 1889.

temperature normal; evening, 99, nothing coming through drainage-tube, which was removed. After this time the temperature never rose above the normal, and the patient progressed without an untoward symptom, to recovery.

Correspondence.

To the Editor of the CANADA LANCET.

SIR,—Under the head of "*The care of the Insane*," in your August issue of the LANCET, you animadverted at length on "the ponderous mechanism of the existing laws for the admission of an insane person into one of our asylums," and you say "the difficulty seems to lie in the magisterial supervision of those held to be insane."

You seem either not to know, or have omitted to mention, that more than one-half of the insane are now admitted to our asylums without coming under magisterial supervision, and a much larger number, if not the whole, might be admitted without it. I fear that in too many cases it is done for the purpose of being relieved of expense and trouble. It may be said that patients who are violent have to be sent to gaol for want of room in the aslyum. This may have been true to some extent in the past, but without speaking for other asylums I may say that every application made to this asylum for the past two years has received prompt attention, and a vacancy awarded at once. I cannot therefore too strongly urge upon the profession and public the necessity of making application to the Asylum, instead of the magistrate, for the admission of lunatics, thus giving them the advantage of early treatment, and saving the poor unfortunates, who have already enough to bear, the further reproach of being thrust into gaol to consort with common criminals.

Yours,

JAMES RUSSELL.

Asylum for the Insane,
Hamilton, Aug. 10th, 1889.

FROM OUR LONDON CORRESPONDENT.

LONDON, Aug. 12th, 1889.

There is certainly no city in Great Britain offering greater opportunity for the study of diseases of children than Liverpool, and as far as I have seen, no hospital where the work is better or more thoroughly done. There are two resident medical officers, a surgeon and a physician, and the amount of cases these two men have to watch for their respective chiefs is very great. Of course the scrofulous diathesis is a prominent factor in the ailments of these little ones; the amount of deformities and variety is appalling, and one cannot be but thankful that such sights are indeed a rarity in Canada where food and fresh air is so easily obtainable. This stunted growth and wizened face, bent and distorted limbs has one other cause, which cause is now being prominently brought before the public by the London press—that of marriages contracted by mere boys and girls. These lower classes frequently make parties of four or six couples and go off on a sort of matrimonial picnic. The *Daily Telegraph* of July 19th, says, in an article entitled "The Weeds of Whitechapel,"—"Here is the base on which Whitechapel poverty stands; here is the difficulty which makes reformers hopeless. Troops of boys and girls marry and are parents of rickety children before they are out of their teens. They have no more forethought than rabbits, and they give to the world whole swarms of miserables, who make even a good man of philanthropic tendencies cast up in his mind the chances of civic collapse. When I have seen that wholesale, unhallowed matrimony—one lot (twenty couples) were married in my presence, and I believe there was not a ring or a washed hand amongst them." The writer goes on to say that he hopes the authorities will try to stop these horrible early unions, but even if they did that these people are so entirely void of morality, that they would live together and dispense with the marriage vows, as thousands do now. This factor we rarely ever have brought before us in Canada, although rickets is common enough, but I never have seen such extreme cases, and probably never will outside the great centres of England. Regarding treatment, I can say but little, as it is about the same as anywhere else, that is, the medical treatment. The surgical I will probably say something of in my next letter. As the Samaritan closes for operative work this week until October, every one has been crowding there—the operations came thick and fast. The only one of note being performed by Knowsley Thornton—nephrectomy on the right side and nephrotomy on left. The woman had symptoms for over

a year, pointing to stone in kidney. The section revealed a kidney, or rather shell, immensly dilated and full of water. No pus to be seen anywhere. The incision was made through the linea semilunaris, and the dissection and separation of capsule very simple owing to the parts being so much stretched, that when fluid was evacuated the sac could be easily brought to the surface and gradually separated with the fingers. Thornton did not tie the ureter and cut it off close, but brought it through the incision and kept the end outside by piercing with a safety pin; his reason for so doing being that he found in his fatal cases that this ureter was buried in a deep abscess sac, which abscess probably was caused by the ureter, so that when the sac constricts this ureter is grasped tightly in the cicatrix; he then examined the left kidney and found a stone in the pelvis; this was taken out through an incision about one inch long—the scalpel being plunged through the substance of the kidney with one stroke—the kidney being pressed firmly into the loin by the left hand in the abdominal cavity. A drainage tube (rubber) was placed through the incision, and a careful toilet made. The woman so far, five days after, is doing extremely well. Mr. Thornton tells me he would never try to take a kidney out through the loin under any circumstance, no matter how small; the abdominal incision being much more easily managed in every way, the command of the sac more perfect, and the drainage quite as good. The stones were of equal size, mulberry calculi and very prickly, almost like a green horse-chestnut. Mr. Thornton has done thirty-three cases with six deaths, a wonderful performance surely. Dr. Bantock did some four cases of section, all simple. Mr. Meredith had a number of cases, the only one of note being a double pyo-salpinx, which, on examination, through incision, seemed impossible to get at, a complete roof of adhesions covering the uterus and ovaries, but the most patient dissection taking two and one-half hours completed successfully a very difficult operation. There are a great number of Canadians here, amongst whom Dr. Thorburn, Jr., is doing good work on throat and chest, and is at present assistant to Dr. Lennox Brown.

NEW YORK POLCLYNIC. — Dr. H. C. Coe has been elected to the Professorship made vacant by the death of Professor James B. Hunter.

Reports of Societies.

CANADA MEDICAL ASSOCIATION MEETING AT BANFF.

The meeting at Banff, August 13th and 14th, will be remembered by all those who attended, as one of the most pleasant outings which the medical profession have enjoyed for many a year. The C. P. R. contributed to the comfort of the members and delegates in its usual excellent style. It is not often that members of the Association have an an opportunity of spending so long a time together; and the length of the holiday, together with the desire to see the far west, prompted many to accept this opportunity. We may say it was one grand excursion, indeed so novel and varied were the scenic attractions, that it threatened to interfere with the regular work of the meeting, and, as it was, numerous were the groups of excursionists who could be seen accepting the warm hospitality of the trickling spring, cooled with a pinch of *spiritus frumenti*. Notwithstanding all this, however, the meeting was a scientific success.

Dr. Adam Wright, of Toronto, contributed the first paper, which was entitled "Hæmatoma of the Vulva and Vagina," and was freely discussed by Drs. Marcy, of Boston; Ross, of Toronto, and Stewart, of Truro, N. S.

"The Climate of Alberta" was the subject of a paper by Dr. Kennedy, of Fort MacLeod, and was full of interest to members of the Association, who showed the keenest appreciation of the subject. The climate of Alberta is generally regarded as the most healthful in the Dominion, and this opinion was sustained by the paper of Dr. Kennedy. Pneumonia was a rare disease and phthisis was seldom met with in the territory. The climate was free from all sudden changes, and it was urged that on account of Alberta being possessed of all the advantages and none of the disadvantages of Colorado, patients suffering from consumption would find more satisfaction in coming to the Northwest than in leaving their own country.

The discussion following was extremely interesting and somewhat humorous, and was taken part in by Drs. McInnis, of Edmonton; Henderson, of St. Paul's; Praeger, of Nanaimo; Bentley, of New Westminister; Oldright, of Toronto; Henderson, of Kingston; McLennan, of Trenton, and others.

Dr. Gibney, of New York, followed on the subject, "The Treatment of Hip-Joint Disease." Drs Connor, of Cincinnati; Strange, of Toronto; Roddick and Shepherd, of Montreal; Cameron, of Toronto, and others continued the discussion.

Dr. Buller, of Montreal, presented an interesting paper on "Preventive Deafness," in which he drew attention to the importance of immediate attention being paid to the slightest symptom of deafness in childhood.

Dr. Stewart, of Montreal, read notes of a number of cases in which sulphonal, a new drug, used to relieve sleeplessness, had been used. Investigation has proved sulphonal to be highly useful, and the indications are that it will likely take the place of morphia in many cases. It has no efficacy for the relief of pain, but given in doses from 15 to 50 grains it produces sleep which is not followed by the unpleasant effects of the commonly used narcotics. There seems to be no danger of patients acquiring the habit, the same as with morphia or chloral, and, besides, it is not a depressant to the heart's action as these latter drugs are known to be. Dr. Stewart had found twenty-grain doses to produce very satisfactory effects. Dr. Whittaker, of Cincinnati, and others who have had experience in the use of sulphonal, endorsed all that Dr. Stewart claimed for this new remedy.

Dr. Grasett, of Toronto, presented a paper on the treatment of Colis' fracture, and an interesting discussion followed, in which Drs. Cameron of Toronto; Sloan, of Blyth; Stewart, of Truro; Smith, of Seaforth, and others took part.

Dr. Whittaker, of Cincinnati, contributed an interesting paper on "Varicella," an extremely common disease of childhood, but one to which this distinguished American physician gave a good deal of interest by his well-written essay.

Papers read by title:—H. B. Small, "Mineral Springs of Canada"; Stirling, "Vertigo, and Eye and Ear Affection"; Lapthorn Smith, "A Common and Easily Preventable Cause of Uterine Displacement"; John Campbell, Seaforth, "A Case of Necrosis following Compound Fracture."

The Nominating Committee reported as follows:

President-elect—Dr. Jas. Ross, Toronto.

Vice-Presidents—Dr. D. Eberts, Dr. Brett, Dr. R. Spencer, Dr. Bruce Smith, Dr. E. P. Lachapelle, Dr. Holden, Dr. L. Johnston, Dr. McLeod.

Local Secretaries—British Columbia, Dr. Præger; North-West Territories, Dr. Rutledge; Manitoba, Dr. H. Higginson; Ontario, Dr. J. J. Farley; Quebec, Dr. John Elder; New Brunswick, Dr Raymond; Nova Scotia, Dr. Muir; Prince Edward Island, Dr. Waburton.

Next place of meeting, Toronto, early in September.

The majority of the members of the Association, after the meeting, took advantage of the liberal arrangements afforded them for a trip to the Pacific.

Selected Articles.

ON THE DIAGNOSIS AND TREATMENT OF GASTRIC ULCER.

BY WILLIAM M. ORD., M.D.,

Physician to, and Lecturer on Medicine at St. Thomas' Hospital, London, Eng.

(*Continued from August No.*)

We may next contrast gastric ulcer with the graver malady, malignant disease of the stomach. Pain is, of course, a very frequent symptom of this affection; pain mostly increasing in severity as the disease advances, and comprehending many varieties from dull to acute. It may be aggravated after meals, or it may attain its greatest intensity when the stomach is empty. But its extension is usually much larger than that of gastric ulcer. Vomiting is common, and while having a certain relation to food-taking, occurs at all sorts of intervals. There is very often ineffective retching when no food has been taken. In considering the characters of the matters vomited, we cannot avoid thinking most of the symptom of hæmorrhage, but in the first place we may notice that the vomit, whenever occurring, is usually of a strong acid reaction, and that, besides mucus, there is generally a considerable quantity of fluid, evidently a secretion of the stomach. As in the case of ulcer, the position of the new growth goes far to determine the period at which vomiting takes place; and I think it cannot be doubtful that the character of the ejecta is very much determined by the position and character of the new growth. What we see thrown up by a patient having an ulcerating new growth in the middle of the stomach, is assuredly of a very different matter from what is observed in scirrhus of the pylorus. I think, though I should not like to be too dogmatic on the point, that the acidity in both cases is excessive.

The elements of this acidity have attracted a good deal of attention of late in France and Ger-

many. It is asserted that the acidity, in cases of malignant disease, is due to other substances than the hydrochloric acid which, as is generally believed, forms the main sourness of the gastric juice, various organic acids taking the place of the inorganic. And there are many who to-day believe that the existence of malignant disease, as opposed to non-malignant disease, may be fairly well recognized by studying the reaction of the gastric juice. The test most in vogue is the tetrethyl-damido-triphenyl-carbinol-oxalate, or vivid-green salt, a crystalline substance of a brilliant green color, which yields, when dissolved in water, a blue solution. Hydrochloric acid being added to such solution, effects a distinct color-change to the green. The organic acids fail to produce such a change. In applying the test, a solution of hydrochloric acid, of the strength found in gastric juice, is first applied to some of such solution in a test-tube; next, to an equal quantity of the same solution, contained in a test-tube of equal size, an equal quantity of the fluid filtered from the vomit or withdrawn from the stomach is added. A comparison of the contents of the two tubes will determine the comparative amount of hydrochloric acid present in the secretion of the stomach under investigation. It is strongly urged that a marked failure in the production of the green change is indicative of malignant disease.

During the last year, I have submitted this test to observation wherever it was possible, and have certainly obtained some interesting results; but not uniform enough to justify me in accepting the reaction as decisive, and these were cases of short, previous duration, which got well under treatment, and went out without any other sign of malignant disease. One of the difficulties of color-tests and solutions is, that the vomit in cancer very often contains blood; when this addition occurs, it is usually constant, and while, of course, varying in quantity, is not generally large. It is mostly in the "coffee-ground" form, but sometimes in the form of small, variously colored clots. This, of course, stands in great contrast to the large hæmorrhages at long intervals occurring in gastric ulcer of the young adult female. To revert here in greater detail to an interesting point relating to the quantity of matters vomited: As in ulcer, where the malignant growth is at the cardiac end or middle of the stomach, the intervals are short, and the amount brought up is comparatively small; but in growths near the pylorus or involving it, intervals as long as twenty-four hours, or more, are observed. The amount when vomited is very large, and the matter consists of a thin fluid with a sediment of digested matters, having a reddish-brown color. Such a vomit is generally teeming with *sarcina ventriculi*.

Tenderness is mostly found in malignant disease of the stomach. It may be acute or dull, and I believe that the intensity is very much determined by the position of the growth as well as by its nature. I believe that the ulcerative forms are the more tender, and I have certainly felt many pyloric tumors which were almost insensible to pressure. On the whole, however, tenderness, when existing, is much more diffused than that of gastric ulcer.

If we review what has so far been stated in the point of diagnosis between malignant disease of the stomach and gastric ulcer, save and except the chemical action of the gastric juice, nothing actually decisive has been put forward. The real test is the presence or absence of tumor, and the true method of diagnosis is to examine the epigastrium with the greatest care. As far as experience goes, tumor, if existing, can be felt in about seventy per cent. of the cases. The existence of a well-defined tumor, in association with more or less of the symptoms enumerated, will enable us, for the most part, to make a definite diagnosis. The tumors which escape manipulative detection are, doubtless, such as are situated on the posterior aspect of the stomach. Though they may here elude direct recognition, they still produce many of the symptoms described, and by pressing on deep-seated structures will introduce new signs enabling us to recognize their position.

In the final diagnosis, we have to remember that the simple gastric ulcer affects, for the most part, young women who are anæmic, but not cachectic; that cancer affects older people of both sexes, who are generally cachectic in appearance, and have pigmentation of the skin as well as anæmia. It may be noted also that, in malignant disease of the stomach, variations in the size of that organ are much more common than in ulcer. The importance of such variations, however, will be better seen when we come to the consideration of the diffused gastric ulcer.

The various functional disorders of the stomach, comprehended under the term dyspepsia, often simulate gastric ulcer. The two symptoms, pain and vomiting, may, in functional disorder of the stomach, be conspicuously present, but they are rarely present together. When present individually, they rarely have the same marked relation with food-taking as is observed in gastric ulcer, and if any tenderness is observed, it is not localized, and is associated with general hyperæsthesia. There is, of course, no tumor, no hæmorrhage, and no fever; moreover, there are usually present associated conditions of general nervous debility, or local irritations, which may favor or determine disordered action of the stomach.

Let us turn now to the diffuse form of gastric ulcer, observed more particularly in middle-aged persons of both sexes. The symptoms here again are mainly pain, tenderness, vomiting, and hæmorrhage. But the subjects are no longer

simply anæmic, and, on the other hand, well-nourished; but are often cachectic and wasted. The pain is, as a rule, much less acute than in the other form of ulcer, and the vomiting much more frequent and distressing. Tenderness in the locality of the stomach and in the whole stomach-area is generally present. The matters vomited are generally intensely acid, and very frequently contain blood, either in the "coffee-ground" form, or as soft clots of various color from pink to black. Such cases present, indeed, the strongest appearance of the existence of malignant disease of the stomach, and the more favorable diagnosis can be determined only by the absence of tumor, and the favorable results of treatment.

In illustration, I may quote two cases. The first was that of a gentleman, aged sixty-four, who consulted me for a pain in the epigastrium which which made his life miserable. It came on at all times, had no relation to food-taking, and when it came it took, as he said, "all the life out of him." He had no vomiting, and no other symptoms of dyspepsia, and had no tumor or tenderness. I prescribed many remedies, calculated as I thought, to relieve pain; but he was no better for any of them; so I took him to Sir Thomas Watson, who prescribed citrate of iron, regarding, apparently, the symptoms as neurotic. Under the citrate of iron he speedily obtained relief, which lasted for nearly a year. Then a relapse occurred, and to pain was added vomiting, occurring at intervals, large in quantity, and with evidences of the presence of blood. Although no tumor could be detected, more than one physician came to the conclusion that he had malignant disease. His sufferings lasted several years. Eventually he died, after an operation for stricture of the urethra; and on post-mortem examination a large, shallow ulcer, presenting no signs whatever of malignant disease, was found at the pyloric end of the stomach, but not involving the pylorus. The case has been, for me, always most instructive.

Let me quote another case. About two years ago, a man was admitted into St. Thomas' Hospital for gastric hæmorrhage. He was a horsekeeper, and had had a severe jerk from the ground, when putting a bridle on a horse. The jerk was followed by severe pain in the region of the cardiac end of the stomach, and by frequent, but small, hæmorrhage. He had suffered from gastric dis-ess and occasional vomiting for some time pre-ous. When I saw him, he had pain after food id subsequent vomiting. Blood was always esent in the matters vomited, but not in large iantity; there was tenderness over the whole omach-area, but no tumor could be felt. He as sent to me with a diagnosis of cancerous dis-se of the stomach. He was emaciated, anxious-king, but not cachectic; nevertheless, on the whole, all his symptoms suggested malignant disease. But as I could feel no tumor, I ventured to hope that he had only gastric ulcer, and not the more serious malady. I treated him on this basis, and in three weeks he had lost all his local symptoms and had gained flesh. It is not necessary, at this moment, to enter into the details of treatment, inasmuch as I shall presently deal with them; but it may be said that he became well-nourished and strong, and has frequently presented himself since, in all respects fit for work.

In many cases of this form of ulcer, gastric hæmorrhage presents itself as a very serious symptom. It goes on from day to day, in addition to other symptoms and has a distinct and dangerous importance of its own. The blood often has a bright color and a spongy consistence. The reaction of the vomit is generally intensely acid. In some cases I have been inclined to associate, with the hæmorrhage, the idea of an erosive action exercised by an intensely acid gastric juice. In two cases of the kind, under my care in St. Thomas' Hospital, the exhibition of alkalies has been followed, first, by cessation of the hæmorrhage; second, by the disappearance of the symptoms of gastric ulcer.

PROGNOSIS.—Dr. Brinton, writing about thirty years ago, calculated from the statistics available at the time, that perforation occurred in between 13 per cent. and 14 per cent. of the cases of gastric ulcer.

There can be no doubt that his book on the subject led to a more general recognition of the disease than had before existed. Whether it be, that, instructed by his writings, I, for one, have been more ready to recognize the symptoms of the affection, or, that the character of the affection varies in successive decades, I am bound to say that comparing the number of cases presenting the symptoms of gastric ulcer and the number of deaths recorded, the proportion of deaths is much smaller than that arrived at by Dr. Brinton. This, perhaps, is what might have been expected. When Bright made his first great generalization, everybody who had albuminuria was condemned to death. We have learned in later years to make very different estimation of the symptom of albuminuria. And I think I may safely say of the patients who come under our care with such signs of gastric ulcer as Brinton and his contemporaries described, very few die.

TREATMENT.—We may now turn our attention to the subject of treatment, which seems to me to be of the highest importauce in gastric ulcer. The people who die of the disease are generally such as have been pursuing their occupations in spite of suffering and without precaution. Here and there, I think very rarely, one will die of hæmorrhage; now and again one will die of the signs of perforation. But I think that if we can

once bring a patient under through hospital treatment, such dangers may be averted; although in advance conditions, we can never overcomed the adverse influences of adhesion of the stomach to other parts, and deep ulceration.

My experience of the treatment of gastric ulcer leads me, in the first place, to attach great importance to simple physical rest. A physician is commonly called upon to deal with two very distinct classes of cases: first, those occupying beds in hospital; second, those consulting him at his own house, or coming as out-patients. The in-patients, kept in bed, and debarred from all movement that can be avoided, make much better progress than the others who are moving about. I must admit that, in private practice, I have experienced great difficulty in keeping patients as completely at rest as I could wish, and that the results of treatment of them are far less satisfactory than those obtained in hospital. I commend this point to general practitioners, who have much greater opportunities of following the patient's symptoms from day to day, than are open to the consulting physician. In practice, I hold it to be right that the consulting physician should always advise the patient to secure the care of a medical man near at hand, and under his guidance to carry out the first principle of treatment—physical rest.

Next comes physiological rest. No one can doubt that all mechanical indigestibles must be forsworn. All experience shows that, in relation to the comfort of the patient, meats, uncooked foods of all kinds, all mechanical indigestibles, and stimulants must be forbidden. After this large excision, idiosyncrasies of the patient have to be considered. Some can take milk and eggs, and soft farinaceous foods with impunity, while meat juices irritate them. Some can take the meat juices and not the milk food. Some can take nothing whatever without great suffering. Those who can take the milk and egg foods may leave us easy on the subject of their nutrition. Those who can only take the meat juices have but imperfect sources of nourishment, and in these cases, as well as in those cases wherein no aliment can be taken without pain, we are compelled to administer aliment by the rectum.

Of late years a good many nutriment suppositories have been invented, and have been much vaunted. They have a certain advantage in being more easily retained than fluid enemata, when the rectum is irritable. But, in a general way, I believe that fluid enemata are much more effective. They should consist of from four to six ounces of beef-tea and milk in equal proportions, with a drachm of Berger's "liquor pancreaticus," and should be prepared at a temperature of about 98° Fahr. Egg may be in certain cases added, and, where there is great exhaustion, a small proportion of brandy. In more than one case of gastric ulcer with severe symptoms, I have used such enemata for a month, allowing nothing to be taken by the mouth save water, with the result that the nurition of the patient has actually improved.

As regards treatment by drugs, I venture to say that generally very good results may be obtained. The treatment must be a good deal determined by the proportion between the symptoms of gastric ulcer and those symptoms supplemented by gastric catarrh. Supposing that we have the symptoms of gastric ulcer without gastric catarrh, I am in the habit of giving twenty grains of carbonate of bismuth with ten grains of carbonate of soda, and ten drops of tincture of belladonna, three times a day. If there be much sign of gastric catarrh, what I am accustomed to call Brinton's mixture, viz., ten grains of bicarbonate of potash, three grains of iodide of potassium, and three drops of dilute hydrocyanic acid in infusion of gentian, three times a day, is prescribed. The use of this mixture for a week or a fortnight will generally subdue the catarrh, and the subsequent use of the bismuth mixture rarely fails, in uncomplicated cases, to effect a cure.

Complicated cases will be generally much relieved by this, but rarely cured. By complicated cases I mean those to which I have already alluded, in which there are signs of adhesion or of deep ulceration. We must not forget the acute complication of hæmorrhage and perforation. In the treatment of persistent small hæmorrhage, I am not inclined to the use of astringents. As a rule, I should rely on a careful examination for the symptoms of the case, and should direct treatment to the removal of the causes of hæmorrhage, rather than use astringents in a blind way. I should use methods for the reduction of gastric congestion, for the neutralization of the excessive acids of the gastric juice, for the relief of hepatic congestion.

In the large hæmorrhages of the simple ulcer, the whole business is generally over before treatment can be instituted. But this does not mean that treatment is unnecessary. A large quantity of blood will have generally made its way into the intestines, where it proves a source of great irritation demanding instant relief. It is my practice to administer, according to the needs of the case, sulphate of magnesia, or sulphate of soda, with dilute sulphuric acid—a hinderer of decomposition—at intervals of two or three hours, until free evacuation has been obtained. These alkalin sulphates appear to me to be the most suitable aperients in all cases of gastric ulcer complicated by constipation. Given early in the morning, they lend effective aid to the operation of the mixtures already mentioned.

In what I have said I have given from individ-

ual experience. There are some physicians who advocate the use of caustics, such as sulphate of copper and nitrate of silver. There are others who advocate the use of opium and astringents; but all I can do is to tell what, in no inconsiderable experience, has appeared to me to be the most effective mode of treatment.

I should like to add a few words on the value of iodide of potassium in the treatment of gastric catarrh, whether simple, or complicating ulcer, or complicating malignant disease. Administered with the addition of some bicarbonate of potash or soda, it is, in my experience, a drug of inestimable value. It speedily removes a simple catarrh. It thereby removes the primary obstacle to the treatment of ulcer; and, in malignant disease, it will often, for a time, so far mitigate the symptoms as to make the patient think he is being cured. I have often found it in malignant disease relieve the patient for a time, and, I think, prolong life with marked diminution of suffering.

It will be observed that I have dealt with gastric ulcer clinically, as I undertook. The subject of the diagnosis of gastric ulcer must be constantly in the mind of the practitioner of medicine. It has been much in my mind for years. And what I put on record here, crude and elementary as it is, represents much careful thought and long observation.

PREVENTIVE INOCULATION.

GENTLEMEN,—In the year 1881, M. Pasteur laid before the members of the International Congress assembled in London an account of recent researches carried on in his laboratory, on the subject of preventive inoculations for chicken cholera and splenic fever. Since that time nearly eight years have elapsed, and we may ask ourselves what has become of the work then begun: has it fulfilled its promise, and what place have the new principles which it involved taken in the science of to-day? It was on these questions that M. Pasteur intended to have spoken to you this afternoon, but the state of his health did not permit of his availing himself of the honor done him by the President and Council of the Royal Society in asking him to give the Croonian lecture this year. He therefore proposed that I should speak in his me, though personally I cannot hope to speak he would have done of the preventive inocula- ons which he himself thought out and initiated. y sole title for addressing you is that of my ing M. Pasteur's collaborator, having had, in t, with Messrs Chamberland and Thuillier, the nor of being associated with him from the commencement of his researches upon the prevention contagious diseases, and, further, that I have been an eye-witness of everything which I shall lay before you.

Most infectious diseases never recur, and thus small-pox, measles, and typhoid fever rarely occur more than once in a life-time. Further, a first attack of an infectious disease, even though a slight one, renders us safe from these diseases for a certain time; and it is this fact, coupled with the non-recurrence of infectious maladies, which has led to the discovery of preventive inoculation.

Instead of waiting till we are struck down unawares by a sudden attack of the malady, frequently during an epidemic of high fatility, and under conditions very unfavorable to our power of resisting it, we now seek to meet it at some favorable moment, and guarded by all those precautions which we know are capable of greatly diminishing the danger. In the place of natural, that is ordinary, infection, unforeseen and over which we have no control, we have now substituted a mode of artificial infection, prepared in such a way as to ensure exemption with as little risk as possible.

It was against small-pox, that for the first time, preventive inoculations were had recourse to. An involuntary experiment, and one, unhappily, too often repeated, had shown that the liquid of the small-pox pustule is virulent, that is to say, that this small-pox lymph, introduced into the body through a wound in the skin, has the power of communicating the disease to a person who has not previously suffered from it. Inoculation with small-pox was, therefore, easy; all that was required for its production being a prick from a lancet charged with small-pox pus. It was, therefore, the custom to endeavor to find cases of mild small-pox, from the pustules of which a virus was taken supposed to be non-malignant, but yet capable of subsequently rendering exempt against the virulent disease those who were inoculated by such a mild virus. It is well known to you how widely such inoculations spread, though far from being of an innocent character, for the inoculation which was supposed to give the disease in a mild form often produced it very severely, and sometimes even the inoculation was the cause of death.

How great, therefore, was the progress made by Jenner in replacing inoculation by vaccination, that is to say, in substituting for a severe illness one which is invariably insignificant, and yet it is efficient protection against infection by small-pox!

Although from the beginning of this century we have enjoyed the inestimable benefit of Jenner's vaccination, we still have not yet completely fathomed its meaning. What is the relation between vaccination and small-pox? Why does the vaccine disease of the horse and the cow, inoculated into man, render him exempt from small-pox? Is the virus of vaccine merely that of small-pox modified, or are vaccine and small-pox two different maladies.

It would have seemed that these questions were easy to resolve as both small-pox and vaccine admit of experimentation upon them; yet though always under discussion since Jenner's time, they yet remain without any definite solution having been arrived at. Jenner's great discovery, which seemed to open so wide and hopeful a horizon, has remained hitherto a solitary fact in medicine. Born of a happy observation, marvellously developed by a genius as patient as it was penetrating, it was at the time of its birth so far in advance of the medical science of the time that even now, after all the progress which has been made during the last seventy or eighty years, we can but suspect its real interpretation. Jenner thus demonstrated to us by one remarkable example that it is possible to protect ourselves from a mortal malady by inoculation with a trivial one; but he gave us no general method leading to the prevention of other infectious diseases.

The discovery of the power of artificially attenuating—that is, weakening—a virus does, on the contrary, furnish us with a veritable method of protective inoculation, and it is one which has given us an uninterrupted series of good results, though this invention dates from but a very few years back. Like all other recent progresses in our knowledge of virulent diseases, it found its origin in M. Pasteur's researches on ferments. In revealing to us the nature of ferments, he taught us that of the poison of infectious diseases. Like the yeast of alcoholic and the yeast of lactic fermentation, viruses are living beings—microbes, as they are now called—and, just as the development of yeast in a sugary liquid produces alcoholic fermentation, so that of microbes in the tissues of the body produces the phenomena of infectious disease. The process which has enabled us to obtain the culture of microbic ferments in a state of purity is the same which has enabled us to obtain pure cultures of microbic virus outside of the body.

The indispensable condition of success in these cultivations is that of absolute purity—that is to say, the avoidance of the introduction of other foreign germs which everywhere surround us. For this purpose we have now arranged a definite *technique*, strict but at the same time very simple. As the elements of the virus are living beings which can be kept in artificial cultivations, and as they are only distinguished from other lowly organized beings and plants by their property of invading the bodies of men and animals, the question naturally presents itself, Would it not be possible to modify them by cultivation in the same way that other plants are modified? Could they not, for example, be thus robbed of those qualities which make them formidable? To modify a virus by special modes of cultivations—such was the idea of M. Pasteur; a fruitful idea, from which have sprung those discoveries which I now propose to lay before you.

It was in studying a malady called "chicken cholera" that M. Pasteur for the first time obtained by this means an attenuated virus. This disease is so fatal to fowls, pigeons, and birds in general that it has been given the name of cholera. It is caused by the development in the bodies of those attacked of a very small microbe, shaped like a small rod with rounded ends, and almost as wide as long. The photograph projected on the screen shows us the image of a drop of blood taken from a fowl which succumbed to the natural disease. You see between the globules of the blood the little rods which are the cause of the disease. It is, however, not the blood alone in which the microbe is found; all the tissues are invaded by it. The intestines contain a great quantity, so much so that the dejecta of the sick fowls are able to spread the malady, and it is in pecking upon the contaminated ground that healthy birds are infected.

If a minute drop of blood from a fowl which has just died of the malady be introduced under the skin of a healthy fowl, the animal inoculated soon falls ill, ceases to eat, its feathers are erected, its wings hang down, and it seems oppressed with unconquerable somnolence. It soon dies, sometimes in less than twelve hours. The blood of the bird which has thus died from experimental inoculation is found to be swarming with the microbe, exactly like that of the fowls which die after natural infection. It seems, then, that chicken cholera is a contagious disease, capable of inoculation, and in which the virus is principally contained in the blood of the animals attacked by it. The culture of the microbe which is so easily accomplished in the blood of the animals can also be carried on artificially.

If with proper precautions we inoculate chicken broth slightly "alkalised," and perfectly limpid, with a drop of the blood, and if we then place the bottle in a stove at 35°C, we shall find after some hours that the broth is turbid, and that this is due to the development of the little chicken-cholera microbe. Under the microscope we shall see that each smallest drop of this *bouillon* contains an innumerable swarm of motionless microbes, like those contained in the blood which served as "seed." An infinitesimally small quantity of this first culture placed in a new bottle will give a second culture and by successive cultivations as many successive generations of our microbe as we wish for can be obtained. Each drop of these cultures, even up to the twentieth, would kill with all the signs of cholera quite as surely as the first, any fowl which was inoculated by it. This experiment affords a decisive proof that the virus of the malady is without doubt the microbe found in our cultures, and as we now know how to prepare under absolutely certain conditions as large quantities of virus the as we wish for, we have all the means at hand for the study of this disease.

If we expose at a temperature of 33°C to the contact of the pure air which penetrates through the cotton wool stopper of the culture flask one of these cultivations which is so active that a drop of it would kill any fowl into whom it was inoculated and if each week we extract a small quantity of the contents of the flask and try its virulence upon healthy fowls, we observe the following changes: During the first week of the experiment all the fowls inoculated die, but after a longer time a change sets in in the degree of virulence. Not all the fowls now die when a certain quantity of this longer preserved culture is injected under their skin. Some recover after having been very ill. As time passes the strength of the virus is still more diminished, and the number of fowls which recover increases. At last, in continuing the experiment, the moment comes, say, for example, after it has remained for two months in the incubator, when this virus, at first so deadly, not only will not kill a single fowl, but causes them apparently no inconvenience whatever; and yet the virus is not dead, for it still grows in fresh nutritive substance in which it may be sown. But in this new culture none of the former virulence returns. The daughter cultures have exactly the same effect upon the fowls as the mother culture had at the time when it furnished the fresh seed. The new property of the virus, therefore, that of harmlessness for those animals for which it was formerly so fatal, can be perpetuated for successive generations. By making such cultivations we shall obtain at their respective dates a whole series of kinds of virus of diminishing activity capable of giving to the animals either a fatal malady, a dangerous malady, a serious malady, or one wholly inoffensive.

To what cause is this gradual diminution of the malady due? To the continued action of the oxygen of the air. If, instead of making the cultivation in a bottle where the renewal of the air is possible, we were to make it in a closed tube only containing a small quantity of air, the mirobe would soon consume all the oxygen, and would cease to grow, for oxygen is a necessity of its development. In a tube deprived of air it cannot grow; it remains alive in it for a very long time, as one can satisfy oneself by sowing in aërated *bouillon* the small culture formed in these sealed tubes. After being preserved for a year in this sealed tube it still gives cultures which are as active as a recent culture from the blood of a fowl just dead of chicken cholera.

We see, therefore, that the diminution in virulence which takes place in those cultures exposed to the air is dependent on that exposure, and not on the length of time the microbe is kept.

Gentlemen, what results were won, what new ideas gained by this single experiment on the culture of the microbe of chicken cholera? By it M. Pasteur showed us that the viruses of infectious diseases are no more the unchangeable entities they were before imagined to be. He taught us that, like all other living beings, the microbic virus is susceptible of modifications which hereditry perpetuates, that it is above all the virulent character which becomes modified, and finally that this modification can be produced artificially and regulated according to the wishes of the experimenter. By this experiment M. Pasteur established the attenuating influence which the air possesses; at the same time he explained how it is that the activity of a virus, under natural conditions as seen in epidemics, is preserved or exhausted, and how the same malady may be sometimes malignant, sometimes light.

We have seen how fowls inoculated with attenuated cholera verus, suitably chosen, took the light form of the malady and soon recovered. If, now, you inoculate these recovered fowls with blood from a fowl dead of the virulent disease and at the same time you inoculate a number of fresh fowls you will find that all the fresh fowls will die while those previously inoculated with attenuated virus will resist the disease. They will merely have a passing illness, which soon disappears. The inoculation with the attenuated virus has rendered them exempt from the fatal form of the disease; it has given them immunity; and, if in the same animals, you make successive inoculations of increasing intensity, you will make them refractory to cholera to such an extent that you may imoculate them with the most virulent blood, under conditions where they would be exposed to the most intense natural contagion, and they will not experience the least inconvenience from it, and it will be impossible to kill them by this illness, which was formerly so formidable.

The attenuated virus therefore discovered by M. Pasteur is quite as efficacious against chicken cholera as Jenner's vaccination against small-pox. But while we are ignorant of the relations between small-pox and vaccine, none of the relations between the vaccine virus of fowl cholera and the virulent virus are hidden from us.

This plan, moreover, is not only successful in the case of chicken cholera, but constitutes a definite method of attenuation of virus, the value of which has been proved by the production through its means of the vaccine of anothor malady more interesting than fowl cholera, as it is both a scourge for cattle and can also be transmitted to man. I mean splenic fever, anthrax, or charbon, for it is by the regulated action of heat and air upon the anthrax virus that the vaccine of this malady has been obtained; but in the case of anthrax a difficulty arose which was not present in that of chicken cholera.

The anthrax virus is found in the blood of animals which have just died of the disease. Culti-

vated in veal broth slightly alkaline it forms a culture resembling cotton down swimming in a clear liquid. This down is formed by long and interwoven filaments, as you see them in the photograph. In the interior of these filaments, after some hours, you see bright spots beginning to appear, the outline of which become more and more distinct. These brilliant spots are the germs or spores of the bacillus discovered by M. Koch; these spores are the veritable seeds of the microbes, and as grains of corn, for example, offer more resistance to heat and dryness than does the growing corn, so the pores can bear without perishing a temperature of 90° C., and the action of a number of agents which would kill the bacteride in its filament stage. The spore is thus the resistant condition of the microbe of anthrax, and whenever it finds conditions favorable to germinating, either in the body of an animal or in some artificial nutritive culture, it will give forth filaments, and these in their turn will produce new germs.

If we expose the anthrax bacillus to a temperature of 38°C and the contact of the air, as we did the microbe of fowl cholera, its virulence will not diminish. Even at the end of a long period it would still kill all the men and animals into whom it was inoculated. It consequently appears that the oxygen of the air is in this case unable to exert its attenuating influence, because the spores which are formed during the first hours of the culture are able to resist its action. In order, therefore, to repeat the conditions analogous to those which were successful in the chicken cholera, we must first prevent the bacilli from producing spores. The way to do this is by cultivating anthrax not now at a temperature of 35°, but of 42° to 43°C. Under these conditions the bacilli develop, producing the filaments but no spores If we try every three days, for example the intensity of the virulence of a culture thus made at a high temperature, and in which no spores are formed, by inoculating it into sheep and rabbits, we shall find that in the first days of the experiment all the inoculated animals succumb; then that the virus becomes less active, and the sheep resist, while the rabbits still die, though after illness more and more prolonged. After a still longer period the culture made at 42° loses its danger for the rabbit, but is still fatal to guinea pigs and to mice. Finally the moment arrives when it is quite harmless even to these little rodents, very sensitive to the anthrax virus as they are. We here see, as with fowl cholera, the virus passing through all the stages of decreasing virulence and finally becoming harmless. The bacilli, which at a high temperature give off no germs, yet form them rapidly if cultivated at 30° or 35° C., and the spores which are then produced preserve the same degree of virulence as the filaments from which they were derived. It is, therefore, only necessary to draw off each day a little of the culture from the bottle at 42°, and to place it in *bouillon* at 85° C., in order to have a series of cultures of graduated virulence and furnished with spores capable of fixing each of these special degrees of intensity. The sheep and oxen which receive these attenuated bacterides exhibit a passing fever, but if, later on, you inoculate them with virulent virus, it has no effect upon them. One has, therefore, only to choose among the degrees in this scale of virulence that which will give to the animal one is desirous of protecting from anthrax an illness slight but sufficient to ensure the desired exemption. In practice the vaccinations of oxen and sheep are done twice. The virus of the first inoculation is very attenuated, and is intended to prepare the animal for the action of the second and more energetic inoculation, which is prepared twelve days after the first. The whole difficulty in anthrax inoculation consists in the choice of these two viruses, and in keeping the relation between their degrees of virulence invariable. Everyone still has in his remembrance the striking demonstration of the efficacy of these preventive inoculations given at Pouilly-le-Fort in 1881. Five and-twenty sheep, chosen promiscuously from among fifty, were inoculated with attenuated virus of anthrax, and afterwards with the virulent virus at the same time that twenty-five other fresh ones were inoculated as a control experiment. The twenty-five vaccinated sheep remained healthy; the twenty-five control sheep died of anthrax. Demonstrative as this experiment was, it did not obviate violent attacks, the first of which was against the principle of the method.

The possibility of obtaining attenuation of the anthrax virus under the conditions laid down by M. Pasteur was denied. It is, however, unnecessary to dwell upon this point, as it is admitted even by those who contested it, for example, Koch and others; and the attenuation of the bacilli cultivated at 42°C. has become a classical fact. The answer to lay criticism is to be found in these tables, which give the number of animals inoculated in France since 1881.

TABLE I.—*Animals Vaccinated against Anthrax.*

Years.	Sheep.	Oxen.	Mortality among Sheep.
1882	243,199	22,916	1.08 per cent.
1883	193,119	20,501	0.77 "
1884	231,693	22,616	0.97 "
1885	280,107	21,073	0.90 "
1886	202,064	22,113	0.75 "
1887	293,572	42,538	
1888	269,599	34,464	

The mortality among sheep before the preventive vaccination for anthrax was ten per cent.;

since that period it has fallen to less than one per cent.

It shows how firmly established these inoculations are in agricultural practice, while the rise in their number is the most convincing proof of their efficacy. The farmer, of course, cares nothing for scientific discussions. For him, preventive vaccination is judged entirely from the standard of profit and loss; and in eight years he has had ample opportunity of coming to a definite conclusion on this point. The mortality among sheep in the anthrax districts has gone down from ten per cent. to one per cent. Insurance companies insert a clause in their agreements making preventive inoculations of the insured cattle obligatory; and in Austria, Italy and Spain the vaccinations are beginning to be widely adopted. What better arguments could be adduced to prove the great service which the discovery has rendered to agriculture? But I do not desire to dwell on this point, and will proceed, having already discussed the attenuation of the virus, to consider the fact of its return once more to the virulent condition.

If in Nature we were to come across one of these attenuated bacteria which we have learnt to prepare, and which are so harmless as to be incapable even of killing a mouse, it would clearly be impossible for us to recognise in this inoffensive microscopical object a descendant of the terrible bacillus anthracis. To do so it would be necessary to have watched it in its stages of gradual attenuation. It is, however, possible (always supposing that the process of attenuation has not been carried too far) to make the bacillus reascend the steps of virulence down which it has come, and so to render it once more virulent.

We have stated that it was not capable even of killing adult mice; but let us inoculate with it a very young mouse, only one day old. This young mouse will be much more sensitive to the action of the virus than the grown up one would be, and it will die in a few days. In developing itself in this young mouse, the bacillus will have recovered a portion of its old fitness for life in living surroundings; and the blood of this first mouse introduced into that of one a little older will cause its death, and thus proceeding step by step from the youngest mouse to the oldest, it will gain power to kill first old mice, then guinea pigs, rabbits, sheep, and last of all, oxen, which are among herbivorous animals the most callous to the action of anthrax.

Thus we see that we can increase the virulence as easily as we can diminish it; and that it manifests itself by the increasing power of the microbes to germinate in the bodies of living animals, a power which can thus be either acquired or lost under respectively appropriate conditions. That this increase of virulence which we have thus excited is going on in Nature we can well imagine; and that a microbe, at first harmless for a particular kind of animal, should afterwards become dangerous to it. Given that some fortuitous circumstance should have introduced it into an animal with but feeble power of resistance, and it will grow there. This first cultivation will adapt it to parasitic life; it will pass out ready to develop in an organism in which it could not previously have gained a foothold, and after several such passages it will become really formidable.

There is no rashness in believing that by such means, in the course of ages new forms of virulence have been evolved, and that these experiments on the variation of virulence throw a flood of light on that most obscure of questions, the origin of new virulent diseases. For these results also explain how one and the same kind of microbe can produce such diverse morbid effects; how, in its active or virulent state, it causes a general disease, rapidly ending in death, and in its passive or attenuated condition produces nothing more than a special local lesion.

Other viruses have also been attenuated by this method of the action of the air upon the cultures. At the Congress held in Geneva in 1882, M. Pasteur cited a whole series of fresh examples. I shall, however, only speak to you of the attenuated virus of a special form of swine fever, a disease much dreaded by farmers, and known in France by the name of "*rouget*,"* as the sick animals are distinguished before death by red patches on the skin.—M. Roux in *Br. Med. Jour.*

(*To be continued.*)

CLINICAL SIGNIFICANCE OF COLORLESS STOOLS.

At the recent meeting of the Royal Medical and Chirurgical Society a paper, by Dr. T. J. Walker, was read by Dr. Andrew Clark, as to the "Clinical Significance of Colorless, or Clay-colored Stools unaccompanied by Jaundice, their Connection with Disease of the Pancreas, and on the Part played by the Pancreas in eliminating Bile from the Intestines" (*Lancet*, March 30th, 1889.) After referring to the accepted views of the significance of clay-colored stools, the author gave particulars of two cases in which, during life, a persistent symptom was the absence of color in the fæces, and in which the diagnosis made of obstruction of the pancreatic duct, with a healthy condition of the bile-duct, was confirmed by the necropsy. From these cases he concluded: 1. That the formation of hydrobilirubin, the coloring-matter of the fæces, depended on the mutual reaction of the bile and

* This form is known in Ireland as "red soldier," and is not the same disease as the pneumono-enteritis called "swine fever" in this country.—*Tr.*

pancreatic fluid, under the influences met with in the intestinal tract. 2. That in disease a deficiency of pancreatic fluid would, equally with a deficiency of bile, cause the pathological condition of colorless or clay-colored stools. 3. That since, according to the most recent physiological researches, that portion only of the colored constituents of the bile which have been converted into hydrobilirubin was excreted in the fæces, while the unchanged bilirubin, bilifuscin, and biliverdin were absorbed, it followed that if hydrobilirubin could not be produced without the aid of the pancreas, that organ must have an important *rôle* in regulating what proportion of the bile entering the intestines should be absorbed and what thrown off in the fæces. Dr. Walker then pointed out that these conclusions received confirmation from the records of other published cases, that Claude Bernard recognized that the pancreas had a part in causing the color of the fæces, and that the state in which the bile pigments were found in the meconium of the fœtus, while the pancreatic function was in abeyance, also accorded with these conclusions. He further pointed out that the fact of the pancreas influencing the excretion of the bile in the fæces would, if accepted, reconcile the discrepancy between the clinical observation that certain drugs produced copious bilious stools, and the physiological observation that these drugs had little or no influence on the secretion of bile by the liver; and that the same fact would explain those hitherto inexplicable cases in which, with no evidence of arrest of the bile-secreting functions of the liver, or of obstruction of its ducts, the symptom of white or clay-colored stools was persistently present. In conclusion, Dr. Walker indicated the practical importance of the views he had endeavoured to establish in the treatment and diagnosis of pancreatic disease and of all forms of bilious disorder.

Dr. George Harley said that the paper required serious consideration, many points in it referring to matters proved, and many to others still doubtful. He quoted several instances which seemed to him to militate against the views as to the action of the pancreas which Dr. Walker had put forward. The meconium of children was only white in those cases in which the bile-duct is occluded; and in cases where a motion half black and half white was passed at the end of an attack of jaundice, the white part would be passed when the bile-duct was blocked, and the black part when it was patent, but the pancreas would be acting in both cases. White stools ought not to be so common as they were if Dr. Walker's views were correct.

Dr. Thudichum acknowledged the instructiveness of the clinical cases, but thought the conclusions drawn were false. How was it proved that bile was eliminated from the intestine? Had bile been found in the fæces? Only a very small quantity of cholic acid had been discovered in the excrement of the dog, not one-twentieth of the whole secretion. Opium would produce colorless fæces, and the same thing occurred previous to an attack of epilepsy in a child; in these cases the bile-duct was not blocked. He had searched for hydrobilirubin in the fæces, and had not been able to find any. Human bile contained bilifuscin, and nothing else, and there was no proof that the pancreatic juice converted it into hydrobilirubin. So also the idea that calomel promoted a secretion of bile was false; calomel produced sulphide of suboxide of mercury, which colored the stools green. The blood never contained bile; it at once disappeared. The formulæ quoted in the paper had been all disproved; and, according to Henle, the average life of a modern physiological theory was four years; therefore no data more recent than this should be quoted as authority.

Dr. Pye-Smith saw facts in the paper which chemical criticism could not detract from. The two cases related were most instructive, and were far better interpreted by the explanation Dr. Walker had given than by any other. That complete obstruction of either of the ducts would produce white fæces was a new point. Dr. Thudichum's criticism did not touch the matter in question, for it mattered not whether the coloring-matter were hydrobilirubin or not. It might be said that there was an *a priori* improbability that pancreatic disease caused absence of the color of the fæces, because the pancreas was singularly free from disease; stone in the duct was rare, as were also abscess or cancer in the head of the gland; the occurrence of undigested fat in the fæces was likewise rare. Icterus simplex was not explained by any physiological theory, and our knowledge was so incompletely established concerning the whole matter that we could not afford to put aside any explanation attempting to account for the causation of these cases.

Mr. C. B. Keetley related the case of a man who died last year of cancer of the head of the pancreas, and who had obstruction of the pancreatic duct. The gall-bladder was enormously dilated with bile, and cholecystotomy was performed; notwithstanding this obstruction, at the necropsy the bile-duct was found quite patent. The fæces were always clay-colored, the man was jaundiced, and the urine was stained with bile throughout.

Dr. Walker, in reply, said he had dealt only with cases without jaundice, where there wer pancreatic symptoms with absolute absence of live derangement. He did not desire to dispute th question whether the brown coloring matter in th fæces were hydrobilirubin or not, and with regar to the startling announcement that bile was nev to be found in the fæces or in the blood, he co

fessed himself confused, and regretted that he could not look on these matters with the clear head of the physiological chemist. The urine, in both the cases he had related, was normal in color; normal bile was found in the gall-bladder and flowed into the duodenum.—*Therap. Gaz.*

PERSONAL DISINFECTION IN CONTAGIOUS DISEASES.

A point which appears to us of considerable value, and which has, doubtless, suggested itself to many physicians attending contagious diseases, and with almost equal certainty has seldom been acted upon, is brought again to our attention through an article published in the *Medical Record* for June 22, 1889, by Dr. L. Mervin Maus, of the United States Army. We can now scarcely deny the germ origin of such diseases as diphtheria, scarlet fever and measles, and it is further well established that the spread of these diseases is due to a material contagion, which in the case of scarlet fever, is almost confined to the desquamated particles of the epidermis. It is well established that the contagiousness of scarlet fever increases with the onset of desquamation, and it is surprising, since the contagious matter is in all probability located in these desquamated scales, that the disinfection of the skin of the patient has not become a routine practice in the treatment of this disease. Unfortunately, one of us is at present passing through an epidemic of scarlatina in his own family, and there the first thought was to endeavor to protect the other members of the family by a disinfection of the skin of the patient, employing the use of corrosive sublimate in 1 to 1000 solution. In all probability this process was not inaugurated sufficiently soon, and did not entirely prevent the spread of the disease. It is known that very close approach to a scarlatina patient, or more or less direct personal contact with the patient, is required for the spread of the disease. If we could only thoroughly disinfect all the surroundings of the patient, we might hope, then, to do away with the spread of the disease, besides greatly reducing the necessity for prolonged isolation. Dr. Maus publishes the following rules as a preventive measure for the extension of this disease, and states that his practice has been founded on personal experience, and so far has been entirely satisfactory. He even states that he believes we can through the employment of this method of treatment ignore isolation, in cases of mild scarlet fever, and ordinarily permit patients to join the family circle in ten days or two weeks.

1. Sponge the patient thoroughly morning and evening with a tepid solution of corrosive sublimate, 4 to 1000, as soon as the eruption makes its appearance.

2. Wash the hair once daily with a solution of the corrosive sublimate, of the same strength, and also a solution of borax, 1 to 250.

3. Disinfect the urine, fæces and expectoration, also the discharge from the ears and nose, if there be any. A solution of the bichloride, 1 to 1000, is best for this purpose.

4. As soon as the patient is permitted to leave the bed have the body washed with warm water and soap, then sponged with the 1 to 4000 bichloride solution, wiped dry, and anointed with the following ointment:

℞ Sodii biboratis,
Zinci oxidi, - - - - - aa ʒiv;
Ol. gaultheriæ, - - - - - - ʒss:
Vaselini, - - - - - - - ʒiv.

The hair should be thoroughly washed with the bichloride and borax solution.

5. The patient is then to be enveloped in fresh and clean clothes throughout, and allowed to leave the sick-room if his condition otherwise admits of it.

6. The bed-linen, soiled clothes, towels, etc., should be placed in a suitable sublimate solution and boiled, and the rooms well disinfected with sulphur. The sulphur candles are very convenient, and the disinfection should be repeated the second day, as the germs are very tenacious of life.

7. Require the nurse or attendant to keep the hair, face and hands well disinfected during attendance, and to likewise make a complete change in his or her garments on date of the disinfection of the sick-room.

8. Continue the provisions of the third and fourth rules once daily until desquamation is complete.—*Therap. Gazette.*

MEDICAL NOTES.

For a case of *chorea* in a child 13 years of age, Dr. Rex ordered 5 grs. antipyrine, t. d.

In *laceration of the perineum*, either operate within 16 hours, or else two months after labor. (Prof. Parvin.)

For a case of *facial paralysis* (Bell's Palsy) of two months' duration, Prof. DaCosta directed 20 grs. potassium iodide, t. d.; the dose to be increasd gradually.

As a rule, avoid stimulus in *pneumonia*, except in cases of drunkards, or where the process has reached the third stage, gray hepatization. (Prof. DaCosta.)

As a tonic treatment for *syphilis*, Prof. Gross advised the following:—

℞.—Hydrarg. chlorid. corrosiv., gr. $\frac{1}{12}$
Tinct. ferri chlorid. . . gtt. xxv. M.
Sig.—t. d.

Functional cardiac murmurs sometimes are heard at the apex, instead of their usual situation over the pulmonary area, but are not transmitted to the axilla, as organic murmurs are always. (Prof. Da Costa.)

In the treatment of *gastric dilatation*, Prof. Da Costa advises washing out the stomach every few days, as much as possible a dry diet, the use of bitter tonics as gentian, strychnia, nux vomica and carbolic acid, or thymol after meals to prevent fermentation.

Treat *cervical leucorrhœa* by applications of iodine (Churchill's tinct.), carbolic acid or a saturated solution of persulphate of iron, in conjunction with hot water injections and tampons of boracic acid and glycerine. (Prof. Parvin.)

In a case of *hysterical sighing*, of 12 months' duration, occurring every few minutes, but never at night, Prof. Da Costa directed 3 drops of Fowler's solution, t. d., and—

℞.—Hyoscin. hydrobromat. . . . gr. $\frac{1}{100}$.
Sig.—Morning and evening.

In the case of a man æt. 28, a dyer in a carpet dyeing factory, who had *epileptic fits* since his 17th year, and the urine containing lead, Prof. Da Costa directed 30 grains of potassium iodide, t. d., and 20 grains of potassium bromide morning and evening.

Treat an *acute ulcer* by putting the patient in the recumbent position, elevate and relax the limb, paint the surrounding tissue with tinct. iodine, diluted one-half with alcohol, and apply the following solution (diluted one-half by hot water) on lint over the ulcer, t. d. :—

℞.—Plumbi acetat., ... ℥ij
Tinct. opii, ... f℥j
Aquæ destillat., ... f℥vij. M.
(Prof. Gross.)

Coll. and Clin. Rec.

Rigors: What they Indicate.—In a paper upon this subject in the *London Lancet*, Mr. W. Gilchrist Burnie reports three illustrative cases and points out a few diseases that rigors may indicate other than those that are commonly regarded as following them.

The first case given was that of a man, age fifty-six years, with good family history. His health was good until within the last few years, during which he suffered from stricture of the œsophagus. When Mr. Burnie was called he found the patient suffering from hemiplegia, from which he made an apparent complete recovery at the end of two months, an attack each of syphilis and gout having retarded the case. The patient, however, continued to be apathetic, had no desire to get out of bed, and soon began to complain of a chilliness and pain in the region of the liver. Mr. Burnie was summoned, and he found the patient in a violent rigor, and with a temperature of 107° F. He conto have one or two of these rigors daily for about six weeks, at the end of which time he died. The most interesting feature of this case is that a post mortem showed that the patient died of melanosis, and no pus was found in any part of the body. The liver was the principal organ involved, being black throughout, solid and somewhat enlarged, and on microscopical examination presenting nothing but cancer cells and pigment granules, no liver cells being seen.

Another point of interest was that although the patient had suffered from a recent attack of purulent catarrh of the bladder, that organ was found perfectly healthy. The second case given was that of a well-nourished young man, who after suffering for a day from general malaise, had a violent rigor, which was followed by a severe pain in the region of the gall-duct. Violent frontal headache and severe pain in the region of the liver continued for two weeks; there was a nightly elevation of the temperature accompanied by violent rigors, followed by profuse sweats. At the end of this time a history of syphilis was obtained and the patient was put upon iodide of potassium and he made a rapid recovery. Four years later syphilitic brain disease appeared, which caused his death. In this case when the rigors occurred abdominal abscess was regarded as the most probable cause of them.

The third case given was that of a primipara who a week after delivery began to have one or two rigors daily. Mr. Burnie observed that when the patient remained in the second story of her house, she improved rapidly and the rigors ceased, but each time she returned to the first floor the rigors were repeated. A decided odor of sewer-gas led to the discovery of an open connection between the lower room and the sewer. The patient was sent to the country, and she rapidly recovered. —*Weekly Med. Rec.*

Carlyle on Medical Men.—In the recently published letters of Mrs. Carlyle there is a sentence in one of her husband's which it will be interesting to medical men to read. Coleridge, the poet, worn down by intellectual strain and the pernicious habit of indulging in opium, wellnigh penniless, neglected by friends and former patrons, was received into the family of Mr. Gilman, No. 3, The Grove, Highgate, a medical practitioner of considerable local repute, in whose family he lived for eighteen years, and was much esteemed. "Poor Coleridge died on Friday," writes Carlyle; "he had been sick and decaying for years, was well waited on, and, one may hope, prepared to die. Carriages in long files, as I hear, were rushing all round Highgate when the old man lay near to die.

Foolish carriages! Not one of them would roll near him (except to splash him with their mud) while he lived; *had it not been for the noble-mindedness of Gilman, the Highgate Apothecary, he might have died twenty years ago in a hospital or in a ditch.*" Distracted in mind, weakened in body, and impecunious—

"O! who can tell what days, what nights he spent
Of tideless, waveless, sailless, shoreless woe!"

Estranged from former social enjoyments and neglected by friends, he found in Mr. Gilman's family a haven of rest, such as Cowper, the poet, had found in the family of Dr. Cotton, at St. Albans, under similar circumstances. These instances tend to rivet the attention to the beneficence of the profession, and reflect what in a minor degree may be found in every district of the country. Medical men are thought to be hardened by the suffering their daily vocation obliges them to witness, but it is not so. Authors, artists, literary men of every kind and degree, widows, and orphans, as well as the poorer portions of the community, could tell how the practice of the medical profession tends, as Watson says, "to temper the feelings and touch the heart."—*Med. Age.*

INFANTILE DIARRHŒA.—The medical treatment is divided to meet the demands of three sets of cases.

1st. Those with vomiting, colic, convulsions, frequent greenish stools and great exhaustion. At the onset give a tablespoonful of the following mixture:

R.—Ol. ricini	℥j.
Glycerin	ʒij.
Ol. cassiæ	gtt. i.

After it has operated freely, give some antiseptic combined with a small dose of opium. Salicylate of sodium is perhaps the best. For a child two years old the correct formula will be:

R.—Sodii salicylatis	grs. iv.
Tr. opii. deod.	gtts. x.
Syr. simp.	℥ j.

M.—Sig. One tea spoonful every three hours.

The result is rapid and satisfactory.

2nd. The diarrhœa may be tolerably frequent and of a vivid grass green color, but unattended by vomiting and marked prostration. This variety is rapidly cured by lactic acid. A two per cent. solution may be given in doses of one teaspoonful every one or two hours.

3rd. This type is commonly insidious in origin; the stools being softer and more frequent than usual for a long time before the onset of alarming symptoms; or it is engrafted on a pre-existing cholera infantum. Fully developed, the stools are green or pale in color, moderately thin, and containing sago-like pellets of mucous with here and there specks and streaks of blood. Later on we find shreds and strings of mucus-like substance, apparently caused by sloughing from superficial ulcers of the colon. Examine carefully into the sanitary surroundings of the patient, and eliminate all errors in diet. A moderate dose of castor oil will remove all irritating matter from the intestine. Then a small dose of opium and bismuth subnitrate will quiet the nervous system and soothe the intestinal mucous membrane. As soon as the number of the stools are reduced to a moderate number, small doses of Fowler's solution of arsenic may be added, and the opium gradually discontinued. Bloody stools are frequently corrected by injections of nitrate of silver, one grain to the pint, at intervals of twelve to twenty hours. When convalescence is established a sojourn to the seaside is advisable.—*New Eng. Med. Monthly.*

PSORIASIS AND ITS TREATMENT. — Psoriasis rarely attacks the skin of the palms of the hands or the soles of the feet, and Dr. Bulkley has never seen it on the tongue, although it has formed over 43 per cent. of all cases of skin diseases which have come under his observation. The cause seems frequently due to change of temperature with much moisture. Between 10 and 15 years of age the female patients were double the number of males, while between 15 and 25 years of age the reverse was true. Over 40 per cent. occur before the second decade of life, and the youngest patient was a little over a year old. Over one-third of all his patients had the disease for ten years or over. The longer the disease lasts the less it is benefited by treatment. The disease is not self-limited. It is most curable in children, and less in patients between 20 and 25 years of age. Psoriasis is a constitutional disease and akin to rheumatism and gout. Meat eating increases its severity, and stimulants precipitate an attack. Oils and fats favor a cure, and wool should always be worn next the skin to avoid sudden changes of temperature, and patients should live in a warm climate. Arsenic, alkalies, and sulphur water are the best medicines to use internally. Local applications are beneficial, especially if applied early, and the white precipitate ointment seems to act better than any other. He has given up the use of chrysophanic acid in in private practice.—Dr. Bulkley in *Med. and Surg. Rep.*

THE BACILLUS OF TETANUS.—Tizzoni and Cattani (*Wiener Med. Presse*) have succeeded in obtaining pure cultures of the tetanus bacillus of Nicolaier-Rosenbach. A patient who had sustained a compound fracture of the arm was brought to the hospital, and developed tetanus. Amputation was performed but failed to save the patient. His blood was repeatedly examined during life,

but no micro-organisms were found and inoculations with it in animals proved negative. Cultivtions of matter taken from the surface of the wound, however, furnished three varieties of microbes, from which the characteristic bristle-bacillus was separated in pure cultures.

At the late Congress of the German Surgical Society, Kitasato detailed some experiments with this bacillus, and exhibited pure cultures. His method of separating it from the other bacteria with which it is generally associated, consists in exposing it to the action of a high temperature (80° C.) This destroys the other organisms, but leaves the spores of the tetanus microbe intact, if the heat is not too long continued. The spores are cultivated in proper media and pure cultures thus obtained. Inoculations of mice produced tetanus, and reinoculations do not seem to diminish the virulence of the microbe.—*Internat. Journal of Surgery.*

ŒDEMA AS A DIAGNOSTIC SIGN IN CARCINOMA OF THE STOMACH.—Dr. C. Baert, of Brussels, writing in *La Clinique* on cancer of the stomach, calls attention to the frequency with which œdema of the ankles is met with in this affection after it has lasted a few months—a diagnostic aid which is by no means new, but is, he thinks, in danger of being too much overlooked at the present day. He gives a number of cases recently occurring in the various hospitals in Brussels in which œdema was present. In one of these cases the œdema came on as early as three months after the first symptoms of the affection made their appearance; in two other cases it was noticed after four months; but in most of the other instances it was delayed till the lapse of from six months to a year after the onset. In one case, where there was no evident cause to which to attribute the loss of appetite and the wasting complained of by the patient, Professor Carpentier, noticing some œdema of the ankle, diagnosed carcinoma of the stomach, and found his diagnosis confirmed by the appearance a month afterward of all the usual signs of the affection. Several of the cases presented a marked increase in the nitrogen excreted in the urine. With regard to the deficiency or absence of hydrochloric acid in the stomach in cancer of that organ, M. Baert admits that it is usual, but agrees with Wolff and Ewald in saying that this sign is by no means peculiar to cancer, as it is found in other gastric affections.—*Lancet.*

EFFECTS OF PROLONGED CHLOROFORM ANÆSTHESIA.—Some observations made about two years ago by Dr. Ungar pointed to fatty degeneration of the heart and liver as the cause of death after repeated prolonged administration of chloroform. Further experiments on dogs have recently been made by Dr. Strassman, which appear to confirm this view. Dr. Strassman found that the first organ to be affected was the liver, then the heart, and after that other viscera. The nature of the morbid change was not a fatty degeneration, but fatty infiltration. The actual cause of death in fatal cases appeared to be the cardiac affection, as in all such a very marked degree of change was found in the heart. In non-fatal cases the morbid change was found to have disappeared in a few weeks' time. When morphia was given previously to the chloroform, less of the latter was required, and consequently the changes produced were not so considerable as when the ordinary amonnt was given. Animals suffering from hunger, loss of blood, etc., were especially predisposed to the morbid changes due to chloroform.—*Lancet.*

INFLUENCE OF THE AGE OF PARENTS UPON THE VITALITY OF THEIR OFFSPRING.—Recently before the Hungarian Academy of Sciences, this question was discussed by J. Korosi, Director of the Czech Bureau of Statistics. His conclusions, based upon 24,000 cases, may be briefly summed up as follows:

Parents of the same age rarely have strong offspring; on the contrary the weaknesses of both parents are apt to be transmitted.

An aged father and youthful mother of average health and constitution, usually secure strong robust children.

The mothers most likely to transmit health and strength to their offspring, are those who conceive prior to their 35th year. Mothers between 35 and 40 years give birth to children eight per cent. weaker than those whose maternal parents have not reached the former age. After 40, children are ten per cent. weaker,—and so on, in increasing ratio. Fathers under twenty years of age, invariably procure offsprings with weak constitutions.

The healthiest and strongest children are the product of fathers between 25 and 40. Any excess of age above 40 is attended with a decreasing ratio of health as to offspring, except where the tendency of transmission in the male parent is overborne by the female—*i. e.*, an old father and young mother.—*The Med. Age.*

THE LOCAL APPLICATION OF HYDRASTIS CANADENSIS.—The peculiar feature of the fluid extract of hydrastis canadensis of producing vascular contraction after its internal administration has led to its internal employment in cases of chronic congestion of various organs. It is strange, however, that as yet it does not seem to have been employed as a local application in spite of the fact that pharmacological experiments with hydrastis have shown that this body is not only a local astringent, but also possesses local anæsthetic properties, a fact which led Dr. Felsenburg (*Weiner Medizinische Blatter*) to test the result of local ap-

plication of the fluid extract of the hydrastis. He states that his results have encouraged him to further experiments in this connection. His studies were made on a series of cases of chronic pharyngitis, complicated with enlarged tonsils. In all cases he states that the results were good. The local application of the fluid extract to the diseased mucous membrane showed a marked decrease in the contraction of the vessels and reduction of swelling with relief of the subjective symptoms. He states that patients readily accustom themselves to the bitter taste of this remedy, and even prefer the painting of the throat with the fluid extract to other forms of gargles or other local applications. Dr. Felsenberg thinks that perhaps a similar use of this remedy in the case of disease of other mucous membrane might lead to equally satisfactory results.—*Thera. Gaz.*

Opium in the Intestinal Hæmorrhage of Typhoid Fever.—Dr. J. A. Lindsay, of Belfast, writing on hæmorrhage from the bowel in typhoid fever, says that he has always been accustomed to follow Murchison's instructions, and has given tannic acid, laudanam, and turpentine, with ice externally and ergotin by hypodermic injections. Some good authorities prefer to omit the turpentine, but he cannot say that he has ever seen any harm resulting from its use, and its power as a hæmostatic is undoubted. In one of his cases he gave laudanam pretty freely, in spite of the presence of albumen in the urine, and with good results—no sign of narcotism appearing. He is disposed to think that in intestinal hæmorrhage, as in hæmatocele and other forms of internal bleeding, opium may be given fearlessly, and pushed even to heroic doses. Stimulants are certainly required in some cases, but must be regulated with much caution. Whilst intestinal hæmorrhage in typhoid fever is a serious symptom, it is by no means usually fatal, and prompt and decisive treatment is called for, and will often prove effectual.—*Dublin Journal of Med. Sciences.*

Exercise and Medicine. — Boerhaave, the famous physician, declared that a man was more likely to get well by climbing a tree than by drinking a decoction made of its leaves! that is, he thought exercise better than medicine. It is on this principle that the Queen of Sweden, whose nervous condition has given rise to much anxiety, is being treated. She is ordered to make her bed and sweep her room, besides taking a large amount of walking exercise. This method—the "housemaid treatment," as he calls it—has inspired a cynical journalist with some suggestions which are, perhaps, wiser than he knows He advises the "office-boy treatment," for the dyspeptic millionaire, the "groom treatment" for the Crœsus whose liver is too much with him, the "country postman treatment" for the obese financier; the "nursemaid treatment" for the hysterical woman who cannot stand a child's cry, and the "old-clothes women treatment" for the fine lady who faints at the sight of powder. Probably the "treatments" would be efficacious—if the patient would submit.—*London Hospital.*

In Fermentative Disorders of the Stomach, and in corresponding forms of diarrhœa, we consider Listerine certainly a safe, and also as a valuable preparation. It is not at all unpleasant to take when properly diluted; especially, then, as an internal antiseptic, do we recommend its use. It is, however, largely used as an external antiseptic, and its oily constituents give it a more healing and penetrating power than is possessed by a purely mineral solution. As a toilet antiseptic to use after a *post-mortem* or similar work, Listerine, with its pleasant odor, needs only to be tried to find a permanent place there. Listerine is a very attractive looking preparation, the liquid being crystal clear, with no sediment or undissolved oils whatever. The Lambert Ph. Co. have introduced their product strictly through the profession, which attests their faith in its efficiency.—*Maritime Med. News, Halifax. N. S.*

Useful Formulæ in Chronic Rheumatism.—Dr. Daniel R. Brower, in a clinical lecture on a patient suffering with chronic rheumatism, fatty heart and fatty liver, published in the *North American Practitioner*, May, 1889, suggests the following formulæ to aid in the removal of uric acid from the system, and to sustain and improve the action of the heart and of the liver:

℞. Lithiæ citrat. . . . . ʒ ij.
Strychniæ . . . . . gr. j.
Tinct. Strophanthi . . . . f ʒ iss.
Aquæ menth. pip. . . q. s. ad. f ʒ iv.
M. Sig.—Teaspoonful before each meal in water.

℞. Aloes . . . . . gr. ij.
Pulv. Ipecac. . . . . gr. j.
Pulv. Rhei,
Ferri sulph. exsiccat.,
Ext. Hyoscyami . . . . . āā gr. x.
M. Div. in capsules No. X.
Sig.—One at bed-time.

Prophylaxis of Phthisis.—Dr. J. C. Wilson, at the late meeting of the Medical Society of Pennsylvania, in the address on medicine, dealt with the above subject. He advanced the following propositions which he discussed in full, viz.:—1. Tuberculosis is a specific infectious disease. 2. The constitutional manifestations are not directly due to the bacilli, but to toxic principles evolved during their growth and multiplication. 3. Tuberculosis is directly and indirectly communicable

from the affected to the healthy individual. 4. It is not in the ordinary sense hereditary. 5. A rational scientific prophylaxis is practicable both as regards individuals and communities.

HYPERIDROSIS AMONG SOLDIERS.—An official circular, addressed to Prussian army surgeons respecting excessive sweating of the feet and other parts among the soldiers as an affection demanding treatment, advises the use of chromic acid as an efficient and economical application, of the strength of one part in ten of water. In cases of hyperidrosis of the feet, such a ten-per-cent. solution, applied at intervals of three, four, or six weeks, has proved sufficiently strong to remedy this source of disability. From the point of view of military hygiene, the prophylaxis of this affection is not merely a question of discomfort and inconvenience, but has its relations to the efficiency of the service, since all soldiers having hyperidrosis will be more or less prone to recurrent catarrhal troubles and to the evils attendant thereon. Hyperidrosis of the feet, moreover, will impair the marching capabilities of the men having that infirmity.

"BLACK EYE."—There is nothing to compare with the tincture or a strong infusion of capsicum annuum mixed with an equal bulk of mucilage of gum arabic and with the addition of a few drops of glycerin. This should be painted all over the bruised surface with a camel's-hair pencil and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, this treatment will invariably prevent the blackening of the bruised tissue. The same remedy has no equal in rheumatic sore or stiff neck.—*N. Y. Med. Times.*

THE TREATMENT OF DIFFERENT FORMS OF HEMIPLEGIA.—Dr. J. Hughlings Jackson, in *Brit. Medical Journal*, says: The type of syphilitic hemiplegia due to a syphilitic endarteritis is not cured by drugs. After the artery is obliterated and softening occurs drugs will do nothing toward curing the paralysis. But active treatment should nevertheless be carried on with mercuricals and iodides in order to prevent similar occlusion of other vessels. There is no doubt that some of these cases of hemiplegia do recover, but not from treatment. All cases of hemiplegia, from whatever cause, that get well, do so through the law of compensation by other nervous elements. This compensation will depend materially upon the smallness and position of the lesion.

TREATMENT OF FRACTURED PATELLA BY WIRING THE FRAGMENTS.—Dr. Ceci, at the Surgical Congress of Bologna, reported eleven cases in which he had treated fractures of the patella by subcutaneous wiring with buried sutures. The patients were for the most part between fifty and seventy-eight years of age. In nearly all the cases the fracture was simple and transverse, but in one there was comminution of the lower fragment, and in another, a man, aged sixty-nine, the bone had been broken a second time two months after the first accident. Dr. Ceci uses silver sutures. All the cases had done well, hæmatoma and non-infective arthritis having occurred only once.—*The Brit. Med. Jour.*

CHRONIC ALCOHOLISM.—In the treatment of this, Prof. Bartholow, says: For the disorders of the digestion, morning vomiting, loss of appetite, accompanied by wakefulness and nervousness, the appropriate remedies are abstinence, careful alimentation, and such tonics as quinine, nux vomica and the administration of bromide of potassium to procure quiet sleep. In the more chronic cases, where degenerative changes may be expected to have taken place, arsenic in small doses, hypophosphites and cod liver oil are recommended, and should be given for several months. Chloride of gold and sodium or corrosive sublimate will retard changes taking place in the connective tissue, if given early enough.—*Coll. and Clin. Rec.*

A CURE FOR DANDRUFF.—Dr. A. J. Harrison, of Bristol, recommends the following salve for dandruff:

Caustic potash	8 grains.
Phenic acid	24 grains.
Lanolin } Cocoanut oil }	āā ʒjv—M.

This preparation should be rubbed into the scalp morning and evening. Complete cure is usually effected in one to three months.—*Le Progrès Med.*

Milk sugar in cardiac dropsy is regarded by Germain Seé as the most reliable and least harmful diuretic. He attributes the good effect of a milk diet almost exclusively to the lactose. One hundred grammes (3½ oz.) lactose will produce an enormous diuresis, increasing the daily discharge in twenty-four hours to two and one-half liters, and daily overreaching this, until on the third day, four to four and one-half liters are voided. Milk sugar, therefore, removes cardiac dropsy surely and rapidly, and only fails if Bright's disease complicates it. It is usually well borne and may be continued for eight or ten day or longer, with intermissions. When cardiac dyspnœa co-exists, Seé resorts to iodide of potassium. —*Times and Reg.*

MENTHOL IN ASTHMA.—Dr. Jones, *Therap. Monats*, recommends the use of a 20% solution of menthol in olive oil in asthmatic attacks.

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GRATUITOUS SERVICES TO THE POOR.

Lord Sandhurst, in his recent address to the House of Lords, in which he urged a "Parliamentary investigation into the financial and general administration of medical charities" in England, gave the following somewhat striking account of the enormous extent of medical relief afforded in the city of London. "The city contains one hundred and twenty-six institutions supported by private benevolence, whether funded or occasional. There are the eleven general hospitals with schools attached, and the eight without schools. There are the sixty-seven special hospitals. There are the twenty-six free dispensaries; the thirty-five provident dispensaries; and the thirteen which require part payment. There are the five surgical appliance societies. Together they minister to the wants of more than *a million and a half patients*, inclusive of upwards of seventy-six thousand whom in a single year they have received as inmates. Then there are the Poor Law establishments for medical relief. Eight infectious hospitals maintain two thousand seven hundred and sixty beds. Twenty-seven Poor Law infirmaries have eleven thousand nine hundred. Forty-four Poor Law dispensaries serve nearly a hundred and fifteen thousand out-patients." The *London Times* of August 1st, 1889, in criticising Lord Sandhurst's address, expresses the feeling of the general public well in its admiration of the magnitude of the work represented by the medical institutions of London. These considerations are of interest to the physicians of Canada, as affording a general indication of the great readiness with which medical men hasten to the relief of suffering humanity everywhere, and whilst we do not wish to infer that it is not the duty of the physician to relieve the suffering poor—a duty which no true physician ever declines—yet, in the interest of justice to all, may we not ask if such services by the medical profession are not *too* readily and eagerly given? Is there any profession, save the clergy, where gratuitous service is expected, and, from force of habit, often expected by those far richer in this world's goods than the physician rendering such service? We need scarcely stop to ask the reason. In large cities the dearth of clinical material is great; too great for the able demonstrator to enquire anything about the pecuniary surroundings of the patient upon whom he bestows his benefits and advice. In private practice competition is keen, and the reputation of being good and kind is a great help to the struggling practitioner.

Rich corporations do not hesitate to ask and receive the labor of the medical profession gratis. Employers of labor make the, all but gratuitous, services rendered by the medical attendant, a reason for reducing the wages of their employees, and make a direct profit out of the doctor. Sanitary boards and organizations are only too eager to bring the best professional talent to the service of the community, who, so far from expecting remuneration for their services, are glad to escape the enmity and vengeance of ignorance.

When things are changed and the doctor meets with misfortune, if he happens to lose a pauper patient by chloroform, or to have shortening or deformity after fracture, then the community cannot be too arrogant and bitter in its evidences of disfavor; the lawyer cannot be too clever in throwing aside every semblance of charity and often truth, in the prosecution of his philanthropic brother, nor the jury too ravenous to satisfy the malice of a pauper patient whom the physician merely from pity sought to serve.

It is not easy to suggest a remedy for the growing evil of free doctoring; but we call attention to the fact, that so long as doctors are willing to work for nothing, it is useless to blame those who accept their services at such a rating. We would urge the profession to remember that a doctor's

best friends are generally among his professional brethren; that a spirit of unanimity existent between neighboring physicians, a spirit which discountenances, as unprofessional and unfair such gratuities will be beneficial; and that a stern opposition to such practices, save in the cases of the absolute poor, will be to the benefit of all.

CIGARETTE SMOKING BY BOYS.

The practice of tobacco smoking has now become so géneral that at present few of the advocates of abstinence from the weed are heard. Temperance in this habit is assuredly necessary, for while in adults the moderate use of the narcotic seems to supply a want, apparently universal, of the human race, its abuse is attended by certain more or less constant evils. This want is evinced by the use of narcotics from the earliest times, all nations, savage, semi-savage, and civilized having employed them in various forms, for that solace which the smoker of to-day finds in his pipe or cigar. Considering the large number, of persons using tobacco, and their general health, it can hardly be said that its moderate use is harmful. Good observers have come to the conclusion that in the majority of cases, tobacco, "used in moderation and when the stomach is not empty has a beneficial effect." This, of course, applies to its use by adults. It has, in those accustomed to its use, a soothing effect upon the nervous system, but, on the other hand, it often acts as a nervous stimulant to mental work, as in reading, business, etc., the student being clearer with his pipe in his mouth and the broker mentally more active while puffing his Havana. Its action as a brain stimulant is believed to be due to the irritation of the sensory nerves of the mouth and nose, which reflexly stimulates the vaso-motor centre, and dilates the vessels of the brain, thus providing for the most complete internal respiration of the brain cells by a free supply of arterial blood to them; an effect similar to that first produced by sipping alcohol.

The difficulty is, that this like other remedies of its class, it is very liable to be abused, excess following the moderate use of the drug, when a whole train of characteristic evils follow; such as furred tongue, irritation of the throat and hoarseness, dyspepsia, irritability of the heart with a characteristic rhythm and palpitation (tobacco heart) trembling, cold clammy extremities, loss of appetite, tobacco amaurosis, sudden fainting spells, etc.

But it is upon young persons that its most baneful effects are seen. While we have above stated that its moderate use by adults is often beneficial, it cannot be too strongly urged that it is a most potent and insidious poison to the young. It is a question whether the present pernicious habit of cigarette smoking by boys is not equally of importance with the use of alcoholic liquors upon the rising generation. In this country we believe it is more harmful, inasmuch as cigarette smokers among boys outnumber spirit drinkers, largely, perhaps by twenty to one. These boys show the characteristic pallor, sickness and nervousness which result from the swallowing of nicotine. Anyone who has seen boys of from ten to sixteen or eighteen years of age, not only smoking, but inhaling the smoke of cigarettes, cannot but have seen the effects of the poison depicted not only upon their faces, but in their listless walk, delicate frame and mental lassitude. The special evils of this form of smoking are well marked. The poorest qualities of tobacco are commonly used in their manufacture, rich in nicotine rather than in the aromatic principles of the best specimens of the plant.

More or less stringent laws have been enacted to restrict the sale of tobacco to children, but we all may observe how non-effective they are. In New York a recent act by the legislature makes it a misdemeanor to sell cigarettes or any form of tobacco to persons under sixteen years of age. Pennsylvania has a similar prohibitory law. Here it is unlawful to sell to boys under fourteen years of age, without a written order from the parents. Girls of any age may purchase. It will be easily understood how boys of any age may, by clubbing their cents, obtain the desired cigarette through the agency of a boy of fourteen years of age, the purchase being divided amongst them. Just how the evil is to be met is a grave question, moral suasion being of little avail among the lower classes who are the greatest suffers from this form of dissipation. A prohibitory law as to the manufacture of cigarettes might meet the case, for while the use of tobacco in any form is detrimental to the health of children, the use of cigarettes is a

doubtedly at the present time the form of smoking which is most prejudicial to the health of the rising generation.

CORROSIVE CHLORIDE IN OBSTETRICS.

Great advances have been made within the last decade in every department of medicine. But to nothing are we more indebted for practical utility, or for accomplishing important. results, than to antiseptics. Their utility had to a limited extent been known prior to Lister's successful experiments of their value in surgical practice, but since Koch's researches and discovery of specific germs of disease, antiseptics have obtained a more extended utility, and proved almost as valuable in obstetrics as in surgery proper. The once dreaded puerperal fever or peritonitis, the terror of both hospital and private obstetrical practice, of the physician and the patient, is no longer the *bête-noir* of the accoucheur, but is now clearly understood, and almost wholly amenable to antiseptic treatment.

The history of the successful employment of corrosive chloride in a large lying-in hospital in Berlin, from May, 1884, to the end of 1887, proves conclusively that, both as a preventive and remedial agent, it is unequalled, and that it has reduced the dangers of septicemia in obstetrics to a minimum. During this period of over two and a-half years, 5,027 confinements were treated antiseptically with sublimate solution, with the gratifying result of reducing the number of cases of puerperal fever from 2½ to 3 per cent., which obtained previous to 1884, to from .02 to .03 per cent. during the exhibition ef corrosive chloride.

The routine treatment, after being put to bed, was to wash the external genitals and syringe out the vagina with a solution, 1 to 4000, which was repeated every two or three hours. The hands of the attendants were disinfected by a 1 to 1000 solution. After delivery, the parts were again washed and syringed with 1 to 4000 solution. Subsequently vaginal injections were dispensed with unless by special order of the physician, but washing the external genitals was continued twice a day.

As to the danger of such treatment, during 1884 the injections were made 1 to 1000 in strength, and no bad effects followed, but from reports from other places of poisonous effects from so strong a solution, they were reduced to 1 to 3000, and afterwards to 1 to 4000, with equally good effects; and now, for uterine injections, 1 to 5000 are used, and in *post-partum* hæmorrhages, 1 to 8000. When the stronger solutions were used a few mild cases of mercuric symptoms were observed, which soon subsided. Intra-uterine injections is used in 453 cases, as strong in some cases as 1 to 1000, but mostly 1 to 4000, in which but few cases evinced any symptoms of mercuric poisoning, of mixed type. In 368 cases the uterus was thoroughly syringed out, which were followed by 10 cases of intoxication, and one had a fatal termination. These records are evidence of the greater danger of intra-uterine injections, and of the necessity of avoiding such injections as far as possible. Yet these results should not deter us from employing them when clearly indicated.

We therefore conclude from the above, and the reports from other lying-in hospitals, that corrosive chloride not stronger than 1 to 4000, should be used in all cases of labor, and especially where the sanitary environment is at all unfavorable.

THE USE OF PESSARIES.—The numerous objections to the use of pessaries which have recently been so strongly urged, seem to have become rooted in the minds of a majority of the profession. Perhaps the pendulum of professional fashion has swung rather too far in this matter. At the Soc. de Chirurg. lately, Dr. Bouilly (*Jour. Am. Med. Assoc.*) defended their use, endeavoring to prove that they are not dangerous. He "would not, of course, defend the employment of those enormous pessaries that were formerly in use, but he would willingly adopt instruments, whether malleable or not, which are made to measure, and which adapt themselves to the parts to which they are applied, such, for instance, the pessaries of Hodge and of Smith. Dr. Bouilly thinks that they are clearly useful in simple, mobile, retro-deviations, and that it would be dangerous not to maintain the uterus in position. Between doing nothing on the one hand, or practicing Alexander's operation on the other, which does not often produce satisfactory results, there is a treatment to institute, and that is of the application of a pessary. Dr. Bouilly had already collected 84 cases of retro-deviation in which he em-

ployed this instrument and which always proved satisfactory. But to apply the pessary, reduction must first be effected, either by the genu-pectoral or knee-and-chest position, or by the method of Schultze. In these conditions an instrument of good dimensions re-establishes the cul de-sac of Douglas, the portion of intestine that was displaced will resume its normal position, and in directing the attention of the patient to the necessity of not allowing the bladder to get full, of avoiding shocks, pregnancy may take place, or the maintenance of the uterus in proper position may be obtained in eight or nine months of treatment. The danger is *nil* when the pessary is well applied, and accidents may occur only in cases where the instrument is too large, ill-chosen and badly applied to a womb imperfectly reduced.. Only once did M. Bouilly see an ulceration in the posterior cul-de-sac, and it was healed up in a few days. It is, of course, understood that the posterior adhesions are a contra-indication.

DR. BROWN-SEQUARD'S REJUVENATION DISCOVERY.—The *Med. Press* reports that at the last meeting of the Société de Biologie, of Paris, Dr. Brown-Séquard said that concerning the "wonderful results" he had obtained from the injection of the liquid from trituration of the testicles of young animals, he could but confirm what he had already alleged. Although he had suspended the injections, he felt himself vigorous, and he had recently made two voyages without the slightest fatigue. He suggested that women could have their vital forces recuperated by injection of a liquid derived from trituration of ovaries! In any case the method of M. Brown-Séquard is not new. Horace, in one of his odes, beseeches the witch Canidia to reveal to him the secret of the draught which she prepared at night by crushing in a mortar pieces of flesh torn from the most fiery horses of Rome, and the patricians, says the Latin poet, used this mysterious liquid with great confidence. Consequently, M. Séquard is but an humble successor of Canidia!

SALE OF TUBERCULOUS FLESH AND MILK.—At a recent meeting of the Scottish Veterinary Society, held in Edinburgh, a motion was submitted by Prof. Williams as follows: "That the Society, thoroughly believing that tuberculosis is a contagious disease, urge upon the Government—first, to stop the sale of milk from animals suspected of being infected; secondly, to suppress the consumption of meat from tubercular animals; and, thirdly, to give compensation for a limited number of years." It was held as an unanimous opinion, as shown by the discussion which followed, that all visibly diseased meats should be destroyed, and that milk from diseased animals is especially dangerous.

OPERATIVE TREATMENT FOR PROSTATIC HYPERTROPHY.—Prof. Kümmel, of Hamburg, in a paper lately read before the Congress of the German Society of Surgery (*Med. News*) stated that he had performed on six patients a partial extirpation of the hypertrophied prostate gland. His cases were very grave, as they had resisted all other methods of treatment. There was fever, bronchitis, and considerable vesicular dilatation. In such cases the operation is indicated, while it is the contrary when the kidneys are seriously involved, or when there is a complete paralysis of the bladder. In this last case the operation is useless, for even after the suppression of the obstacle, spontaneous micturition cannot be re-established. To extirpate the prostate gland he performs superior cystotomy; the bladder is very carefully washed out, and he then destroys, by the aid of the thermo-cautery, not only the median lobe, but also all the parts of the gland which project into the bladder. He then sutures the bladder, and allows Nélaton's sound to remain in it. Out of six patients, one died from collapse, in another the operative result was negative, four are cured and can urinate spontaneously. In the discussion that followed, Prof, Socin, of Bâle, said he believed the enlarged prostate was not so often accountable for the evil symptoms observed, as is the cystitis, which is so frequent a concomitant. He thought that the good results which sometimes follow extirpation of the prostate gland, are due, probably, more to the washing out of the bladder and to the sound left in position—that is, to the treatment of the cystitis—than to the operation itself. The cystitis is the first enemy to combat in the treatment of prostatic enlargement.

TREATMENT OF VARIOUS FORMS OF RHEUMATISM.—Dr, McColl, *Lancet*, gives the following regarding the salicylic treatment of rheumatism.

1. In relieving pain and lessening fever in acute rheumatism the salicylic treatment is most undoubtedly the most effective we know of. 2. The salicylates do not prevent the rare complications of hyperpyrexia, and are absolutely useless in its treatment. 3. It is doubtful if they prevent endocardial or pericardial troubles, the percentage remaining about the same (50 per cent.) since the salicylic treatment as before. They seem to have no influence in curing these troubles when they do occur. 4. There is no proof that the salicylates prevent relapse. 5. It is not proved that the salicylates lessen the duration of the disease, or that they prevent anæmia. With regard to the particular form of the remedy, most writers recommend (and Dr. McColl agrees with them) salicylate of soda in twenty-grain doses, at first every hour for three or four hours according to circumstances. It should be continued in diminished doses for at least eight or ten days after all pain and pyrexia have gone, and in most cases should be followed by iron. Salicylic acid, salicin and salol might be tried in exceptional cases where the soda salt was not well borne. In young children antipyrin might be substituted with advantage. In convalescence, Sir A. Garrod's alkaline mixture, followed by iron, is advised; and, if any joint remained stiff or swollen, blistering or painting with iodine is useful.

Salol in Dysentery.—Dr. R. B. McCall writes to the *Medical Brief* that in treating a case of dysentery in a child five years old he tried the methods of treatment which an experience of fifteen years had made familiar; but, as the boy continued to grow worse, he resolved to try salol, which he administered in two-grain doses every three hours. In speaking of the marked and rapid improvement which followed, he says: "In all my experience I never saw the efficiency of a medicine so unmistakably portrayed by characteristic results—the effects following close in the wake of t' e cause. Dose for first two days was two grains e ery three hours, increased to three grains, and c ıtinued at that as the maximum for three days l ıger; after which it was given for five days l ıger in diminishing quantities until left off.

'In about ten days nearly 200 grains were t en, by a child five years old and that without t least sign of oppression, disturbance of any kind, of stomach, heart, or kidneys, or of brain or mind. I believe salol is perfectly safe to be used in suitable doses at any age, and am persuaded from the above case and from a little experience in summer diarrhœas, wherein its influence was unquestionably kind and effective, that it is destined to be a valuable agent."

Simple Chancres Indurated by Contact of Urine.—Professor Fournier presented (*Jour. of Cut. and Genito-urinary Diseases*) a patient showing several chancres of the prepuce which have the objective aspect of simple chancres, but which to the touch are indurated; beneath them is felt a veritable indurated nodule. In the groins there is no adenopathy, and inoculation upon the arm had a positive result. The induration which accompanies the sores is of an irritative origin; in fact, the patient urinates upon the lesions and bathes them in the urine, which he considers an excellent remedy. Fournier insists upon the practical importance of these cases. The simple chancre is often indurated, and this induration alone cannot be considered as demonstrative of the existence of syphilis. The agents of this induration are multiple, and embrace all sources of irritation, such as dirty dressings, excessive cautery, but especially constant contact with urine.

Infantile Convulsions.—Mr. Valentine Knaggs (*Med. & Surg. Rep.*) advises the use of calcium sulphide in small and repeated doses, as a remedy for infantile convulsions and other nervous diseases. He has observed the best results in convulsions from dentition, falls on the head, meningitis, and acute tuberculosis. For infants under six months of age, Dr. Ringer's prescription is recommended. It is prepared by dissolving a grain of sulphide of calcium in a half a pint of water, of which a teaspoonful is given hourly, the dose being cautiously increased if need be. Dr. Knaggs has found it advantageous to combine this treatment with the administration of antipyrine.

Salicylic Acid in the Treatment of Scarlatina.—A writer in the *Rev. des Malad da l'enfance* says he has administered the above drug in one hundred and twenty-five cases of scarlet fever of a severe type in children, with the happy result of a reduction of the mortality to 3½%. His method has been to give doses proportionate to the

child's age every hour during the day, and every two hours during the night. The writer believes that by this method of treatment he obviates the very serious complications of scarlatina, such as uræmia, anasarca and diphtheria. This method of treatment to be effectual should be begun early, not later than the fourth day, and should be continued for some time after all trace of fever has disappeared in order to lessen the probability of a relapse.

INTERNATIONAL MEDICAL CONGRESS.—We, the undersigned, do hereby give notice, that according to the resolution passed at the Washington meeting, September 9th, 1887, the Tenth International Medical Congress will be held in Berlin. The Congress will be opened on the 4th and closed on the 9th day of August, 1890. Detailed information as to the order of proceedings will be issued after the meeting of the delegates of the German Medical Faculties and Medical Societies, at Heidelberg, on the 17th of September in the current year. Meanwhile, we should feel sincerely obliged, if you would kindly make this communication known among your medical circles and add in the same time our cordial invitation to the Congress. Von Bergmann. Virchow. Waldeyer.

PRIVATE HOSPITAL.—We take great pleasure in calling attention to the private hospital recently opened by Dr. Rosebrugh, of Hamilton, for the treatment of medical and surgical diseases of women. Especial pains have been taken in fitting up the operating rooms for abdominal surgery, combining all modern improvements in the way of plumbing, ventilation and other sanitary arrangements. We are pleased to note such careful preparation for this work by Dr. Rosebrugh, and as he now is one of the oldest abdominal surgeons in Canada, we heartily wish him abundant success in his new undertaking.

TREATMENT OF BURNS OF THE FACE.—Christopher Heath recommends, *Lancet*, the following for superficial burns of the face:

Collodion, . . 1 part.
Castor oil . . 2 parts.

This mixture, while it does not set as firmly as collodion, sets sufficiently to protect the part from the air, which Mr. Heath considers is the great point.

A ten grain to the ounce solution of nitrate of silver, by forming a slight superficial eschar all over the burnt surface, is another good application, though rather painful at first.

OBSTINATE VOMITING.—The following formulæ *(La France Méd.)* may be useful for reference:

(1) R.—Tinct. of iodine . . 16 drops.
Distilled water . . 60 grammes.—M.
Sig.—A tablespoonful every half hour.

(2) *Randolph's Mixture:*
R.—Creasote . . . . 20 drops.
Acetic acid . . . 40 "
Sulph. morphine . 0 gr. ½.
Distilled water . . 60 grammes.—M.
Sig.—Two or three tablespoonfuls every half hour.

(3) R.—Phenic acid . . . 1 drop.
Chloroform . . . 3 drops.
Alcohol . . . . 20 "
Distilled water . . 15 grammes.—M.
Sig.—For one dose; to be repeated one-half hour later, if necessary. Especially useful in Asiatic cholera.

(4) *Cholera Infantum:*
R.—Phenic acid . . . 25 drops.
Alcohol . . . . 25 "
Peppermint water . 45 grammes.
Mucilage of gum arabic,
Syrup of poppy . āā 15 drops.—M.
Sig.—A tablespoonful every two hours.

(5) *Vomiting of Pregnancy:*
(a) R.—Elixir of opium . 30 drops.
Brom. pot. . . . 1 gr. 8.
Water . . . . . 60 grammes.
Sig.—For rectal injection.

(b) Dujardin Beaumetz:
R.—Hydochlor. cocaine . 0 gr. 42.
Distilled water . . 300 grammes.—M.
Sig.—Take a teaspoonful every hour. To avoid the vertigo, remain in the recumbent position.
(c) R.—Fl. ext. viburnum . . 3 gr. 75.
Sig.—To be taken at successive times.

BELLADONNA WITH BROMIDE OF POTASSIUM IN ENURESIS.—Dr. Campbell Black, in a letter to the *Br. Med. Jour.*, states that the above combination has been a favorite with him for the past fifteen or twenty years. He believes it to be of great

efficacy "in all cases of preternatural excitation of the reflex arc, such as obtains in epilepsy, enuresis, spermatorrhœa," etc.

HAY FEVER.—Dr. Jacquess, writing to the *Med. Brief*, says of the following remedies. My wife has been a sufferer from hay fever for fifteen years, and they are the only remedies I have found to relieve her:

℞.—Liq. Arsenical. . . . . 1 drachm.
Tinct. Belladonnæ . . . . 2 ounces.
M. Sig.—Five to ten drops, three or four times a day, commencing three or four weeks before the expected attack.

Also:

℞.—Glycerini . . . . . 1 ounce.
Acid Carbol. . . . . 20 drops.

Apply up the nose and bathe the eye-lids, two or three times a day. For the cough, use the glycerine and carbolic acid internally.

CONSTIPATION IN FEMALES.—The following is said (*Lutand, Rev. de Thér.*) to be very efficacious in the stubborn constipation of females:

℞.—Cit. of iron and ammon. . 31 grains.
Fl. ext. of cascara sagrada . 32 ♏.
Saccharine . . . . 8 grains.
Distilled water . . . f ʒijss.—M.
S.—Half teaspoonful before each meal.

FOR LEUCORRHŒA.—*Med. Prog.* gives the following from *Gaz. de Gyn*:

℞.—Infusion of chamomile . . ʒxvij.
Alum . . . . ʒijss.
Iodide of potassium . . ʒj.
Tincture of iodine . . ♏xxxij.—M.

Three injections should be made daily, and, in addition, general tonics and sulphur baths are advisable.

CORROSIVE SUBLIMATE FOR HYDROCELE.—Dr. Barnard, writing to the *Lancet*, says that a solution of corrosive sublimate, one in 1,500, gives excellent results. He says that the untoward effects of iodine, such as pain, shock, consequent irritation and inflammation, were eliminated by this treatment.

PRESENTATION.—Dr. Lawton, of Harwich, was the recipient of a handsome solid silver water set, on the occasion of his leaving Harwich with his wife, to reside in England. We beg to present our congratulations and best wishes for the future happiness of Dr. and Mrs. Lawton.

CHILBLAINS.—The following is said (*Med. Age*), to be an excellent remedy for chilblains:

Spirit camph.; tinct. opii, āā ʒij; acid carbol., gr. xl; spirit vini, ʒiv; aquæ, ʒiv.

BROMIDIA.—I have used the Bromidia (Battle) and the results obtained have been really excellent. It certainly combines all the advantages of other preparations of this nature, while at the same time it possesses none of their disadvantages. The fact that it produces no unpleasant sensation on awaking, renders it specially valuable.

St. Nazaire-sur-Loire, France. DR. LUD. MARC.

PERSONAL.—Dr. Bowlby, Jr., Trin. Coll., has lately succeeded in taking the L.R.C.P. Lond. and M.R.C.S. Eng., diplomas. He is one of the few Canadians who hold the double English qualification.

On and after July 30th, 1889, *The American Medical Digest* will be merged in the *Philadelphia Press and Register*, both being published by The Analyst Publishing Co., 10 Park Place, New York.

HIS ROYAL HIGHNESS the Prince of Wales has sent a donation of one hundred guineas to the fund which the Lord Mayor of London, is raising in aid of the Pasteur Institute of Paris.

Books and Pamphlets.

A SYSTEM OF OBSTETRICS, by American authors. Edited by Barton Cook Hirst, M.D., Associate Professor of Obstetrics in the University of Pennsylvania, etc., etc. Vol. II., illustrated with 221 engravings on wood. Philadelphia: Lea Brothers & Co.

We can only again repeat our criticism on volume I. The second volume of this work bears out in every way our anticipations of what the work would be, when reviewing the role of those who had promised contributions. This work not only treats of obstetrical conditions in the ordinary set way, but being an eminently practical as well as an exhaustive treatise, deals in the fullest possible manner of the hundred and one accidental complications which may arise in obstetrical cases. In volume II. considerable attention is given to instrumental labour and to turning. The pathology of puerperal infection is ably and scientifically discussed, and the most modern views re-

garding its prevention ably explained, as well as stress· lain upon some older and very practical points which in this age of fine theory might be passed by or forgotten.

The chapter on inflammation of the breast, and allied diseases connected with childbirth, is worth the whole price of the volume. It is practical, and so far as our judgment goes, complete. Indeed one might so speak of each succeeding chapter of this very estimable work which we apprehend when completed, will be one of the most classical works on obstetrics to be found in any language.

A TREATISE ON SURGERY, its Principles and Practice, by T. Holmes, M.A., Cantab, Consulting Surgeon to St. George's Hospital, Associate Member of the Chirurgical Society of Paris. With 428 illustrations. Fifth edition. Edited by T. Pickering Pick, Surgeon to and Lecturer in Surgery at St. George's Hospital, etc. Philadelphia: Lea Brothers & Co. Toronto: Carveth & Co.

The present edition of the above popular work is considerably enlarged and is certainly brought up by its able editor to the standard of the present knowledge of surgery. The section on Diseases of the Eye has been wisely, we think omitted. The reasons for such omission, in the present stage of ophthalmic surgery are obvious. Considerable changes have been made in the discussion of inflammation; wounds and their treatment; tumors; diseases of bones and joints; abdominal surgery and intestinal obstruction, and diseases of the breast. Another especial feature of the new edition is the discussion of operative treatment in reference to cerebral localization. The general plan and character of the work leave nothing to be desired, and the student will find all important matters pertaining to the subject of surgery, concisely yet plainly put.

A GUIDE TO MATERIA MEDICA AND THERAPEUTICS, by Robert Farquharson, M.D., Edin., F. R.C.P., Lond., LL.D. Aber. Lecturer on Materia Medica at St. Mary's Hospital Medical School, etc. Fourth American, from the fourth English edition, by Frank Woodbury, A.M., M. D., Professor of Materia Medica, Therapeutics and of Clinical Medicine in the Medico-Chirurgical College of Philadelphia, etc. Philadelphia: Lea Brothers & Co. Toronto: Carveth & Co. 1889.

The size of this always popular book has been increased by about sixty pages. The principal changes made have been in leaving out certain remedial agents which have become obsolete, and in adding a large number of others which are now looked upon as reliable and lasting. The list of omissions might, we think, have been made larger without lessening the value of the book; but the author is hampered, as is every lecturer on the subject, by the retention in the B. P. of scores of useless articles which are never prescribed by scientific physicians, but which are solely and truly a burden to the student. The form of the work is retained, the physiological and therapeutical actions of the chief drugs being placed side by side. It will be found a handy book of reference in therapeutics and materia medica, both to the busy practitioner and to the medical student.

DISEASES AND INJURIES OF THE EAR; Their Prevention and Cure, by Charles Henry Burnett, A.M., M. D., Aural Surgeon to the Presbyterian Hospital; one of the Consulting Aurists to the Pennsylvania Institution for the Deaf and Dumb, etc., etc. J. B. Lippincott Co., Philadelphia and London. Price $1.

In this little treatise the author aims at presenting the subject of Diseases of the Ear "in a form free from technical terms," and we think he has eminently succeeded. In no subject in medicine is prevention simpler and more important than in diseases of the ear, to recognize the early symptoms is often to save a life. We think this work of Dr. Burnett is one which will give valuable information in its department, and as a plain and practical treatise on Diseases of the Ear, we can highly recommend it to both physician and layman.

EXPLORATION OF THE CHEST IN HEALTH AND DISEASE, by Stephen Smith Burt, M.D., Professor of Clinical Medicine and Physical Diagnosis in the New York Post-Graduate Medical School, and Hospital Physician to the Out-door Department, Bellevue Hospital. D. Appleton & Co., New York.

This is a practical treatise of 206 pages, abundantly illustrated. It deals in a ready way of the ordinary methods of physical examination of the thoracic viscera. Its rules are simple, easily applied, and it will prove a valuable little work to students in acquiring a practical knowledge of that all-important subject.

THE CANADA LANCET.

A MONTHLY JOURNAL OF

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Original Communications.

A WONDERFUL POST-MORTEM.

TRANSLATED BY DR. J. WORKMAN.

Five years ago Professor Tebaldi, of the University of Padua, published a charming and very instructive little book, with the title *Ragione e Pazzia*—(Reason and Madness.) He was well qualified for the task, as he had well and long studied both his subjects. It is never possible to translate from one language into another any work of genuine merit, without more or less detraction from the force or beauty of the original, and none understand this better than those who undertake to turn into our bald but powerful English idiom, any production appearing in the primitive garb of the sweet and graceful language of Italy. It is a pity that so interesting a book as this of Professor Tebaldi should be passed over unheeded by English and American publishers, for it would, or at least it certainly should, command an extensive sale.

We purpose at the present time to abstract from its pages a portion of the concluding chapter, but with the admonition to the reader, that he is not take to this as a specimen of the preceding contents. It is manifestly but a parting *jeu d'esprit* of a good-natured author, but it may be read by that class of young men for whom, no doubt, it was mainly intended, with some profit.

We must now allow Professor Tebaldi to speak for himself, in introducing the wonderful personage who was the protagonist of a most thrilling drama.

"Before parting with my reader," writes the kind-hearted Professor of Psychiatory, I would like to answer a question which is frequently heard by alienists :—Do we find in the organic changes of our subjects any which may account for the numerous and varied forms of mental disorders? Is there a material structural alteration of the brain, which should explain the strange manifestations of insanity?

The answer might be rather difficult, but I shall try to give it by relating a singular occurrence which happened in a University of this world or if better should please if the reader in the world of dreams, into which I am pleased sometimes to wander.

An old professor, whose hairs had become silvered in the study of insanity, and who was accustomed to long vigils whilst poring over questions of science, was one night overtaken by drowsiness; he placed his head against the back of his chair, and closed his eyes, to get a little repose. When he awoke he found on his table a letter; it showed no post-stamp; it was strangely addressed, a little in one direction and a little in another, partly in small characters, and partly in large, with some hieroglyphics interposed; it was just one of those to which alienistic physicians are accustomed, and thus it read :

My dear and good Doctor,—A sentiment of profound gratitude, to which I am not a stranger, my respect for the untiring kindness which you lavish on your patients, and the desire to explain an occurrence which has caused so much noise, have induced me to address to you this letter.

I know that the sedate and tranquil minds of the Professors of this celebrated University, as well as of a few of the public authorities, have been much disturbed by the fact of the disappearauce of the body of a woman from the School of Anatomy; here I am to explain the secret, and by so doing I hope to quiet the minds of all those gentlemen.

You know who I am, and you will well remember that, whilst I was your clinical guest, you made a world of enquiries in order to know me thoroughly. My genealogy was traced back to its most remote source, and it was discovered that I descended from a merry and thoughtless god; my features were studied as earnestly as those of a lover; my body was subjected to a thousand examinations and experiments, poked, punched and peered into in every part; convulsed by electricity when I was quiet; restrained in a camisole with long, closed sleeves, when I became too lively; my inward parts were no less annoyed, for I swal-

lowed as many pills and decoctions as might have terrified a hypochondriac.

At last I was one day believed to be dead, and I hoped now to have peace, but I was disappointed. I must, distinguished doctor, make to you, in strict confidence, a confession, without which you could not comprehend the mystery. You must not regard me as the equal of any of the other afflicted ones who have the good fortune to be under your care; I am a privileged being. When I was yet in baby swathings, a genius came to my cradle, and bestowed on me some whimsical caresses, and placing her hand on my tender forehead, she pronounced nearly these words, which have proved prophetic: "Live, dear child, as long as humanity shall endure, and every individual who shall look upon you, or shall touch the hem of your vestment, or possess a lock of your hair, shall derive something from you, and transmit it to most distant generations. The spirit shall animate every several part of your body, so that, even when detached from all the others, it shall still have sense and consciousness, and by its own proper virtue it shall tend to reunite with them."

If, Doctor, you look closely into these words *of obscure color*, you will find something which was before known to you; as to the truth of the last part of them, here I now am to prove the truth of them, by relating to you, in length and breadth, all that happened to me whilst I appeared to be dead.

You had just pronounced the fatal word, "*morta*," when I felt the white sheet drawn over my face. A few hours afterwards, two rough hands laid hold of my shoulders, and two others of my feet; I was laid on a litter, and next placed on a long table, in a row with six or seven other bodies. Having once commenced the fiction, it pleased me to go on with it; and I wished to see how it would end. They tied a string round my great toe, and attached the other end to a little bell, and I was left in that cold and silent company. I took care not to move a single member, lest somebody might come in; by and by I turned my head, and peeped at those seven or eight faces, white and motionless, which were my neighbors; I gave a little smile, hardly enough to show my teeth.

Twenty-four hours passed, and then those two gentlemen returned, and with but little politeness they denuded me; they lifted me up, and then let me drop into a box, but not without paying a compliment to my body, which, as a handsome female, I accepted with gratification, though I was obliged to appear dead. I was carried out of this place, and I passed into the hands of a man who was still more rude than the first two; this fellow was the grave-digger; with the assistance of another he lifted me out of the box, raised me high up, and let me plump down on a hard cold stone table, that would have made any creature shiver.

Now began a strange exhibition. All around, on the seats of an ampitheatre, were stretched a hundred young fellows, some of whom were near to me, and you, dear Professor, were among these; the others were higher up and more distant. Oh! how many eyes were fixed on my members, which I, through all my life had so modestly guarded, excepting on occasions in which I was rather indiscreet. How many complimentary epigrams did I hear!

One long, lean gentleman, with a thin gray beard below the chin, and a pair of spectacles on his nose (he was very like you, Professor), and wearing a long, black, glossy cloak, came near where my head was placed on a wooden pillow. An iron hand squeezed my face and pressed it against the hard cushion; I then heard a very sharp blade running round my head, from which the hair was removed, and the skin was cut down to the bone; next I heard the scalp leaving the skull, with a sort of rustle, very like that given by my silk dress when I used to attire myself for a ball.

I did not feel the least pain, and I listened with curiosity to what the Professor was saying to one of those young students, who had come beside me, and from time to time rested his writing board on my abdomen, with very little respect, if I must tell the truth.

They now, with a saw, removed the upper half of the cranium. When the Professor uncovered the brain, there was a general movement of curiosity; all eyes, armed with magnifying glasses, were turned to this organ, which, being very carefully raised out of its shell, was placed on a weighing scale; and when the Professor announced the weight of it, there was an exclamation of general astonishment, for it exceeded not only the average of that of the brain of woman, but even that

ascribed to the brain of man. A shower of compliments was then bestowed on me from the benches of the school, and I was very near breaking into a laugh, but I choked it within my throat, because it would have scattered the whole gathering.

They now began to slice the brain, but I did not lose a bit of my consciousness or my finest senses. I heard the Professor at every cut uttering his remarks, which were spiced with strange words, such as the topography of the brain abounds in; these classic pearls dropped from his lips whenever he had to speak of lobes, nodes, ventricles, feet, pillars, tubercles, thalami, and a thousand other things. His observations invariably ended —*all normal!* (nel testo, *ganz normal*).

At one moment he held up, on the point of his scalpel, a reddish, round bodikin, on which I had never before bestowed any attention, and jokingly he said,—"behold also the Pineal gland *ganz normal.* For a little pleasantry, the Professor now made a short digression, whilst he related an anecdote pertinent to this little body, believed in the past to be the centre of life. He stated that a certain literary personage, named Brossette, a famous Cartesian commentator, who, having lost a wife whom he dearly loved, resolved to keep, as a memorial of her, the most precious part of her; he therefore preserved the pineal gland, and had it put into a ring, which he religiously kept on his finger for more than thirty years after her decease. All the students laughed at this, but not I, for I had too often heard the beliefs of the past laughed at in the schools, and some day yet I expect to hear those of the present laughed at.

When the pieces of my poor brain were placed in a vessel, I felt the knife running over my breast and abdomen, and then, after learned cuts and tearings, a hand grasped my heart, raised it out of its mysterious nook, and carried it to the light of day. Some of the students now lighted their cigars; the smoke of tobacco has indeed its place in the dramas of the heart; why then should it not honor its dissection? The odor of my internal parts perhaps disturbed the olfactories of these genteel youths:—alas, what a metamorphosis of matter!

My heart, as a dethroned sovereign, was laid on my breast; the point of the knife was pushed into it, and it was split open in two or three directions; they fingered its walls and explored its every recess; but, deluded in their search, they put it back into its lodging. I tell you truthfully that these wounds, inflicted on the dearest of my organs, were the only ones that made me feel a sort of thrill; but I found comfort in the thought that the treasure had long ago been removed from its shrine; they sought for the prize in an empty casket. Sentiments, affections, passions, emotions, ravings, all its tumultuous array, I had given over to the custody of other keepers. It had no longer any need to beat, and therefore I stopped its motions; they might then cut away to their full content; a single strong contraction would have driven those jolly students and that grave cold anatomist out of their wits; but for the present I denied myself this pleasure, feeling certain that my half hour would in time come to every one of them. What they did with me afterwards it is unnecessary to tell; you know it all quite well; in the end I got off with only my arms and feet sound, excepting a few slits on them bestowed on me for pastime.

I was hoping that this entertainment had closed, when I was put to a fresh trial. The Professor, having cut off a little slice of my brain, put it between two glasses, and placed it under a lens which magnified enormously. "Behold," I heard him proclaim, "a nervous cell!"—and all those gentlemen, one by one, looked at it, but on finishing I thought I heard them say to themselves,—"we knew all that before."

After this the Professor turned round to his scholars, and with much solemnity declared:—that as no special lesion was found, to which death could be ascribed, they must hold that the cause of this patient's death must have been paralysis of the heart.

I laughed in all the little bits into which they had divided my poor body.

A stroke of the bell emptied the amphitheatre; the sexton remained, and smoking the stump of a cigar, and muttering with a monotonous cadence a vulgar jest, he threw my ill-used members into the casket; he then poured water over the stone table, to make it ready for another dissection; after which he took off his black, blood-stained tunic, and with his wonted refrain and the last puffs of smoke, he went out of the school.

A profound silence now reigned in that chamber of death, when every part of my body, seized by

the force of affinity, moved towards those which had been its neighbors during life, and in a short time I felt myself re-made; the edges of the wounds of the heart were united; it commenced to beat, and the blood again flowed through the most distant windings of the vessels. As if awaking from a fearful dream, I raised my head and looked around, and hearing no sound I arose from that dread repository and proceeded to the door. I was naked, and I must cover myself with something; it would have made a devil of a row, and they would have shut me up again in the asylum if I had gone out in that state; and yet those young fellows had seen and examined me from head to feet; so I took down from its peg your black gown and put it on me; I put a white covering on my head, and then I went forth from that place which I shall never be able to forget.

Once outside, I became mistress of myself; I went around, as is now my custom, among the people; to-day I walk in professional vestments, which suit me just as well as any other, in which I disguise and conceal myself.

You have now, my dear Professor, the story of the post-mortem of a living woman. You may be grateful to me for the secret, as I am to you for all the kindness lavished on me by you, and for all the experiments made on my body both in life and supposed death. I do not kiss your hand, fearing that I might thus infect you with a little of my own whimsicality; but I make you a low courtesy, and I hope to see you soon again, in some new and interesting resemblance.

Continue to me that friendship which was so great a favor to me, and which shall never be forgotten by

Your most devoted,

La Pazzia.

SOME OBSERVATIONS ON LACERATIONS OF THE PERINEUM.*

BY H. S. GRIFFIN, M.D., HAMILTON, ONT.

In opening this section with a short paper upon lacerations of the female perineum, it may be objected that the subject has been so fully and exhaustively handled by eminent gynæcologists, that not only is it presumptuous on the part of a general practitioner to take it up, but that there is actually nothing left to say. My only excuse is, that it is one of general and universal interest to every physician engaged in general practice; and though I may be unable to throw any new light, yet one may fairly be justified in believing that, among the many able gentlemen present, information of interest and importance may be elicited from the discussion which it is the object of this paper to call forth.

I have said that it is of special interest to the general practitioner, for the reason that every physician meets continually with cases in practice, and the secondary effects of an unremedied laceration form one of the most fruitful sources of female suffering and distress. Those physicians who declare that they seldom or never meet with instances of this lesion, may fairly be regarded either as imperfect observers, or else of limited experience.

I have not been able to gather statistics, that are of a satisfactory character, as regards the frequency of the occurrence of lacerations. In fact, statistics are more or less worthless—because what one man will call a laceration, another will not. Indeed, quite extensive tears may easily be overlooked, especially when confined to the vaginal mucous surface. As far as I can judge, about thirty per cent. of primipara suffer from laceration to a greater or less extent. The cause of this frequency of occurrence is difficult to ascertain. It is supposed that in earlier times and among half civilized communities it occurred much less frequently than at the present time and among civilized nations, and it has been thought that this was due to the enlarged size of the fœtal head, naturally evolved from the cultivation of the intellect and improvement of the mental faculties. It may be observed, however, that the process of nature would not be complete without the compensating provision of an enlarged female pelvis.

We may briefly mention some of the more commonly occurring causes which predispose to laceration. As broadly classified by Mekerttschiantz, they are as follows: From the side of the mother —anomalies of the pelvic outlet, projections of the sacral vertebræ, anomalous sacral curvature, capacious sacral hollow, deep symphysis and anomalous axis of the rami, anchylosis at the sacro-coccygeal joint, anomalous pelvic obliquity, rigidity and alterations and abnormalities of the soft parts. Fur-

* Read before the Ontaro Med. Association, June, 1889.

ther factors are the age of the patient, want of elasticity in the perineum, and disproportion between the size of the fœtal head and the maternal parts.

From the side of the child the causes are numerous, altogether aside from congenital vice and abnormalities. Regarding the head, there is a difference of opinion. Hecker and some others maintain that a small head is more liable to cause rupture, as it escapes more rapidly; whereas a large head slowly distends the parts. It seems there is frequently a difficulty in telling whether the laceration is due to the head or the shoulders, but any part may cause rupture. The *direct* causes are, of course, precipitate labor, retarded labor, injudicious use of ergot and of the forceps, etc.

With regard to the means resorted to for the prevention of rupture, the old-fashioned recommendation to supprt the perineum has, I believe, in injudicious hands, frequently been the cause of the trouble it was thought to prevent. Neither do I agree with the practice of greasing the parts. I regard those means only to be rational which are directed towards retarding too rapid labor, and securing more time in gradually dilating the introditus. I have spoken of the injudicious use of the forceps as a frequent cause of rupture; on the other hand, I have the utmost faith in their efficiency to prevent laceration, when skilfully and properly used. We have no means in our possession equal to the forceps, for controlling the course of labor, gradually dilating the soft parts, and safely guiding the head over the pelvic floor. So much so, that I am accustomed to regard the perineum as safe when I have the forceps. They should be applied in cases where rupture is threatened, before it is too late; and in no case should they be removed until the head is completely born. I pass over the subject of anæsthetics, powerful factors though they are in the prevention of perineal rupture, and merely refer to the practice (but seldom resorted to, I trust) of making incisions, only to condemn it. Of manipulating, or kneading and stretching the perineum, the best plan is that recommended by Mekerttschiantz. When the presenting part appears at the vulva and distends the frenulum, the left hand is placed over the woman's right thigh and with the palm turned towards the child, the thumb grasps the right labium and the middle finger the left, and by pulling these together, they are relaxed. The head is thus slowly allowed to distend and expand the vulva. This method I have tried in a number of cases, and believe it to be really efficient.

After the completion of the third stage of labor and the discovery of a laceration, the question of treatment must be immediately considered. This will depend in some measure upon the extent of the lesion. When complete, extending through the sphincter ani and involving more or less of the recto-vaginal septum, there are few who oppose an immediate attempt at repair and suturing the parts together in more or less perfect contact. But considerable difference of opinion exists as to the treatment of incomplete lacerations, and considerable difference of practice obtains, even among those that believe in the immediate operation.

It has been argued that these lacerations heal readily and satisfactorily when perfect cleanliness is observed, and that even when the restoration is imperfect, it does not lead to prolapse of the vagina or uterus; for, as maintained by Emmet, the uterus is swung from above, and not supported by the perineum below. It is also claimed that the symptoms usually attributed to the loss of the perineum bear no relation whatever to the extent of the injury, and that there need be no fear of immediate danger resulting from leaving the lesion unsutured. Adherents of this practice maintain that lesions occurring elsewhere in the pelvis are the sole cause of trouble, whether showing itself immediately, or at a later period; that it is a needless infliction of pain to a wóman who is already worn out and exhausted, and that even when the primary operation is performed, it is far from being invariably successful.

The tendency of the times, however, is rather to the opposite extreme—to the suturing of even the slightest tear. And to the objectors we may reply, that stitching is not so severely painful, even in the absence of anæsthetics, as the condition of the parts is one of more or less analgesia. It is moreover amply proven that restoration of the perineum favors involution of the vagina—a result of prime importance. Nor should it be forgotten that the chances of septicæmia are certainly much lessened by the operation It is our duty to give the patient every chance of obtaining a perfect recovery, especially when the operation is so simple, so easily performed and so generally successful, and when

the only objection worthy of the name is the aversion to give a little more pain.

A brief consideration of the secondary operation will close these few notes. By this we mean all cases where an interval of two or more months takes place between the injury and the attempt at repair. Almost every gynæcologist of eminence, and many who can make no such pretensions, have devised special operations, each more scientific and complicated than the last. I must express my strong preference for Tait's flap or splitting operation, as described by Saenger, above all others for its simplicity, its scientific correctness, the rapidity and ease with which it may be performed, and the facility with which any practitioner may learn it. In my hands it has been most successful, not only in operations for restoration of the perineum, but also in three cases of recto-vaginal fistula. This operation seems to me to present the only practical method of reaching the torn muscular and aponeurotic structures that form the pelvic floor, a result which cannot be obtained by the process of denuding the mucous membrane.

When the laceration extends high up the septum, I have used the buried catgut sutures in the axis of the wound; but I believe, where possible, that it is better to include the entire wound by at least one deep suture. Even when the laceration is of no great depth, I have found a difficulty in passing the ordinary curved needles around it. In order to facilitate the introduction of the deep sutures, I have a jointed needle made, which I have used satisfactorily in two cases, and which I desire to present to the notice of the section. The eye is armed with a silk thread and the point inserted at or near the margin of the wound. The point immediately becomes directable by the handle, and as the needle is freely movable, it can be guided completely around the wound and made to emerge at the desired spot where the suture can be hooked into the silk thread, and the needle withdrawn. Or the eye may be made open, so that the needle can be readily threaded after it is passed. The needle shown is not perfect, the curve should be greater and the needle longer.

Polyuria.—M. Bucquoy recommends (*Br. Med. Jour.*) ergot of rye in simple polyuria. He reduced the daily volume of urine from 14 litres to 2 litres in two weeks' treatment with ergot.

Correspondence.

OUR EDINBURGH LETTER.

(*From Our Own Correspondent.*)

Skin-Grafting as Practised at the Royal Edinburgh Infirmary.

Two methods are now employed here:—I. Where the superficial layer only of the skin is transplanted on a raw surface. II. Where the whole thickness of the skin, as well as a small amount of the subcutaneous tissue, is applied to a granulating or raw surface.

First method.—This process is practised on raw surfaces only, never on a granulating one. The surface to be grafted is first prepared for the grafts. Here nothing has to be done but to see that all hæmorrhage is stopped, and to render the surface aseptic by a solution of boracic acid (saturated). If it is a granulating surface, and this method is to be adopted, the granulations must be first scraped away with a Volkmann's spoon, the bleeding stopped and the surface rendered aseptic by boracic acid lotion. The surface having been thus prepared, is covered by a sponge or piece of lint, wet with boracic acid, while the grafts are cut. The grafts are taken from the patient's own thigh in the case of grafting a leg, or from the arm—over the deltoid region. Whatever part is selected is first thoroughly washed with soap and water, by means of a brush; then with the boracic acid solution, and then with ether. The surface being thus cleansed, the grafts are cut by means of a razor or a very sharp long amputating knife.

They are cut as large in area and as thin as possible, only including the superficial layer of the skin, in such a manner that the surface left after their removal bleeds only slightly. These grafts are then applied to the raw surface that has been already prepared for them, taking care that the raw surface of the graft and the raw surface of the part to be grafted come into contact. They are applied their full size, and the larger the better. Several such grafts may be applied, according to the size of the surface to be grafted. After the two raw surfaces have been placed in immediate apposition, small strips of protective are placed over the parts, boracic acid lint, and a considerable quantity of antiseptic cotton applied, the whole being kept in

position by a properly applied bandage. The part is then placed in the most favorable condition for rest, *e.g.*, in the case of grafting near a joint a splint is applied to keep the parts at perfect rest. The part is then re-dressed every twenty-four hours, using boracic lotion, and avoiding anything that might irritate the part, and the same kind of dressing applied.

This plan of treatment is carried out with all wounds of large size that would have to heal by granulation, as those left after removal of the breast, when the skin is largely implicated. It is also adopted in treating large granulating wounds, as those left after extensive burns, etc., not until the granulations have been scraped away. This operation is not so largely employed in the case of burns, etc., as the second method, to be described.

Second method.—Where the whole thickness of the skin, as well as a small amount of the subcutaneous tissue, is transplanted. This method is practised on both raw and granulating surfaces, the granulations, if healthy, being left. The grafts for the operation are obtained from the parts removed by amputation from healthy patients, or, if this is not possible, from some of the lower animals.

Strips of skin four or five inches in length, or longer, and about three-quarters or an inch in width, are dissected off, along with a small portion of the subcutaneons tissue. These strips are then placed in a solution of boracic acid (saturated), and then used from time to time as required. You must first make certain that the patient, from whom these grafts are to be taken, has not been affected by any specific disease, etc., otherwise syphilis, tubercle, etc., may be communicated to your patient by the grafts. The grafts obtained may be used with success after having remained in the solution of boracic acid for days, even as long as fourteen days.

Having thus obtained the grafts, the surface to be operated upon is now prepared. In the case of raw surface, nothing has to be done but wait til the hæmorrhage has subsided, then, after idering the parts aseptic by washing with a ution of boracic acid, the strips of grafts are plied to the wound. A number may be placed n, according to the size of the wound and extend m one end of the surface to the other.

a granulating wound is to be operated upon, the grafts are simply applied to the healthy granulations after they have been rendered aseptic; or, if the granulations are not healthy, they may be scraped away with a Volkmann's spoon, and the grafts then applied to the raw surface. The parts are then placed at perfect rest, and dressed daily as in the previous method.

This method has met with great success of late, and the great advantages, not only of rapid healing of the wound, but of all the elements of the true skin being contained in the result over a wide area, are obvious to all.

Selected Articles.

PREVENTIVE INOCULATION.

(*Continued from September Number.*)

The microbe of *rouget* is a bacillus which is found in the spleen and the lymphatic glands of the swine which die of the disease. In cultivation it produces no spores, and is therefore specially amenable to the influences of the air, and, in fact if left long enough exposed to its action, its virulence is totally destroyed. But there is a further method of attenuation discovered by MM. Pasteur and Thuillier, and which is of great interest, as it shows the changes which a virus may undergo in its passage through animals of different kinds. *Rouget* injected into a rabbit kills it within a few days. A small quantity of the "pulp," from the spleen of this rabbit inoculated into a second one will cause death still more quickly, and the disease can thus be passed throngh a whole series of rabbits. But the extraordinary point (discovered by MM. Pasteur and Thuillier) in these inoculations is that, as the strength of the virus increases for the rabbit it is diminished for the pig; so much so that, after a sufficient number of passages of the virus have been made through the rabbit it has become a vaccine for swine, able to confer upon them exemption from the fatal form of malady.

With this example before us, the question arose, What would happen with certain human diseases if we made them also pass through a great number of different kinds of animals? Is not this very process taking place in Nature, and does it not give fresh support to the idea that the vaccine of small-pox becomes modified by its passage through the horse and the cow?

After all this work upon the prevention of fowl cholera, anthrax and swine fever had been accomplished, M. Pasteur devoted himself to the study of rabies. When, in 1880, the study of this disease was begun in M. Pasteur's laboratory, the

following facts concerning it were alone known: that it was an infectious disease; that the virus was contained in the saliva of rabid animals, and that it was transmitted through their bites. We knew also that the period of its incubation varied from some days to some months, and here our definite knowledge of its pathology ended. Many experiments, however, had been made on the subject, but two causes had rendered them especially difficult to carry out and their success uncertain.

Inoculation of the saliva of a rabid into a healthy animal does not always produce rabies, but often has no effect whatever. Among animals susceptible to the malady, some only become rabid after such a lapse of time that the prolonged waiting, combined with the uncertainty of the results, puts the patience of the experimenter to a most severe test. The saliva of a rabid animal affords an untrustworthy virus, because it contains a quantity of different microbes, which, when introduced under the skin contemporaneously with the virus of rabies, may prevent the development of this latter, and set up inflammatory processes originated by their growth. The first thing to do, therefore, was to find some source of the virus of rabies which should be uncontaminated by other microbes. All the symptoms of rabies arise from the disturbance of the nervous system; hence the idea that in that system the rabic virus was specially to be found presented itself to the mind. The previous attempts made, however, to show that the nervous system of a rabid dog was virulent were unsuccessful, because the manipulations to which the nervous matter was exposed in order to inoculate it introduced into it those other microbes which it was essential to exclude.

By inoculating with absolute purity from the spinal cord the brain or the nerves of an animal which had died of rabies, M. Pasteur demonstrated that the true seat of the virus was to be found in the nervous system. A portion of the nerve centres of a rabid dog injected subcutaneously into a healthy one will produce rabies more surely than the most active saliva. This demonstration enabled us to take a decided step forward in its study. The rabic virus being contained in the nervous centres, and the symptoms depending entirely upon that system, the idea naturally followed that the disease only showed itself when the nervous centres are attacked by the virus. Further, that the incubation period is governed by the time taken by the virus to travel from the point inoculated up to the cerebro-spinal axis and for its development therein. If, therefore, the virus be inserted directly into the nervous system, where it has to develop, the incubation ought to be shortened and the disease follow with certainty, because the virus can no longer be destroyed or diverted from its course during its long journey.

Gentlemen, experiment has fully confirmed this theory, as may be seen from the record of the first dog inoculated by trephining, in which the incubation period was reduced to fourteen days. In fact, any dog inoculated under the dura mater with a little of the spinal cord or brain of a rabid dog takes rabies with absolute certainty and within a period rarely extending beyond eighteen days. Thus we are delivered from the uncertainties belonging to subcutaneous inoculations and from the weariness of a long incubation period. After this experiment, the study of the disease went rapidly forward; it was proved that the virus existed in the nerves and that by that route it travels from the original wound to the brain and spinal cord, and also that it can in some cases be conveyed by the circulatory system. It will be seen, therefore, that the manifestations of rabies may be varied, as the manifestations of the disease in the beginning will depend upon the particular region first encountered by the virus, and finally why it is that there are forms of the disease which until now were unrecognised. and which differ from the classic type. The operation of trephining is in itself harmless when performed with proper antisepteic precautions. It is as successful with the rabbit as with the dog. If inoculation by trephining is performed upon a series of rabbits from the spinal cord or medulla oblongata of an animal which has just died, and this process is continued with successive animals, we find that the duration of the incubation period, which was at first from fourteen to eighteen days gradually diminishes. It becomes shorter and shorter as the number of passages of the virus increases, until, at the end of a hundred of the successive inoculations, it has gone down first to seven days and finally to six. At that point it remains stationary, the rabic virus seeming then to have attained its maximum virulence for that animal (the rabbit), and the virus is said to be "fixed." It is from this "fixed" virus that M. Pasteur obtains his vaccine for rabies by a process similar in several details to that already used for attenuation in chicken cholera, swine fever, and anthrax.

If in a bottle with an upper and lower tubulure containing below fragments of caustic potash and closed by a piece of cotton-wool there is placed a spinal cord of a rabbit which has served in a passage series of inoculations, this cord, which contains a quantity of "fixed" virus, gradually dries, preserved from dust and exposed to the contact of the air at a temperature of 25°C, care being taken to keep it at this point. If each day we take a small quantity of this cord and inoculate on the surface of the brain of a rabbit, we shall perceive that as the cord becomes dry in the sterilised warm air so it loses its virulence. At the end of five days' drying it will only be capable of killing some few of the rabbits who have received it. At the end of fourteen days we find it absolutely in-

nocuous after having passed down the scale of gradually diminishing activity during the preceding days.'

Having now obtained our material containing the attenuated virus, if we each day inject subcutaneously into a dog a portion of the attenuated cord, crushed in water, taking care to begin the injection with the harmless fourteen days' cord, to go on on the second day with the thirteen days' cord, then the third day with the twelve days' cord, and so on till we reach the cord at zero, or, in other words, spinal cord unattenuated, spinal cord which is deadly, this dog thus inoculated will not die, nay more, we may try him with the most active rabic virus inoculated into the brain and he will remain perfectly well, though we know that otherwise intracranial inoculation produces rabies without fail. There is, therefore, positive proof that the injections of the dried cord have produced exemptions from the disease. The experiment may be repeated as often as you please, but the results remain the same. Dogs which have subcutaneously received the series of cords commencing from the fourteenth day cannot take the disease either from the bites of mad dogs or in any other way. The exempt condition has been obtained in one fortnight.

Usually rabies remains latent in a dog which has been bitten for a period generally exceeding one month. It might therefore be possible to profit by this long incubation period to give before its manifestation exemption from the malady. To elucidate this point, out of a number of dogs bitten by rabid dogs, or inoculated under the skin with rabic virus, some were preserved for control experiments, while the others were subjected to the preventive inoculation of the dried cord in augmenting degrees of virulence. Of these latter not one took rabies, while of the former a great number died with the characteristic symptoms of the malady. It was proved possible to prevent hydrophobia even after the bite.

Notwithstanding, however, the favorable results obtained upon animals, the application of the same method to man was undoubtedly a bold step. By what urgent solicitations and "medical advice" M. Pasteur agreed to take it is a matter of history. In July, 1885, the boy Meister terribly bitten by a rabid dog, was the first to undergo the anti-hydrophobic inoculation. It is a noteworthy date, and marks an epoch, not only in the history of M. Pasteur, but in that of Science herself. I shall not dwell upon that which is well known; how, after this first successful attempt, persons bitten came to the laboratory from all parts, nor how, since then, each month about 150 persons came to obtain the antirabic inoculations. Some among you have been present at these inoculations, and have seen how the emulsions of dried—that is, attenuated—cord are prepared to avoid the introduction of any alien germs. The injections are made in the side on the right and left alternately, and are repeated during fifteen days. For ordinary bites the inoculations start with the fourteen days' dried cord, and end with that of three days. For more dangerous wounds, those of the head and face, the number of inoculations is greater, and we proceed to the more recent cords more quickly, as it was soon discovered that these last-mentioned kind of wounds required a more active treatment.

Since the commencement of the inoculations until now (March 21st, 1889) 6,870 persons have been treated in the Paris Institute alone; and among them many were very severely wounded. The proof of the rabidity of the animal which gave the bite has been furnished either by experiment or by veterinary examination in 80 per cent. of the cases. The mortality among the persons bitten by indubitably rabid dogs and thus treated is about 1 per cent., a very low rate if compared with that of 15 per cent. which usually follows the bites of mad dogs. It is scarcely credible that this extremely small number of failures should have given rise to such violent attacks against this practice; the most contradictory accusations have been brought against it. It was declared to be inefficacious, that its good results were obtained by the treatment having been applied almost entirely to persons bitten by healthy dogs, that the statistics showed that as many persons had died in France of rabies since the introduction of M. Pasteur's system as before it. This last assertion was made by badly informed persons who took for complete statistics documents allowed to be insufficient even by the very individuals who published them. The proof of the efficacy of the system is to be found by examination of those cases where the rabidity of the attacking animal was incontestably, because experimentally, proved; and above all, from such of these cases as were bitten on the head and face. In this latter class alone, it is well known that the ordinary mortality is 80 per cent., whereas among those treated at the Pasteur Institute the mortality does not reach 4 per cent.

Other adversaries asserted that the treatment was dangerous, and increased the probability of death, and thus found themselves confronted with the singular paradox of a dangerous treatment enormously diminishing the death-rate of the disease, and with their previous assertion that the inoculations produced no result whatever. These last opponents were furnished in support of their contentions with the violence of their assertions alone, as they had made no experiments whatever.

Others followed, however, who contended that they had proved by experiment that the foundations themselves of the system were unsound, and that the antirabic inoculations could not give im-

munity to dogs. The fate of these pretended experiments is well known to you. They were shown on unquestionable authority—that of the English Commission charged with the inquiry into the inoculations—to be inexact. You know, gentlemen, of whom this Commission was composed,* and in order to answer once for all the whole series of attacks, it is only necessary to recall their judgment as embodied in their report—namely, that M. Pasteur had discovered a method of prevention against rabies comparable to that of Jenner against vaccination. The absolute nullification of fatal results among persons bitten by mad animals and treated I do not, however, believe to be possible.

Nearly all the individuals treated who have succumbed to the dsiease developed it during the fortnight following the commencement of the inoculation owing to the fact that in their case the virus passed probably by the blood-stream to the nervous centres immediately after the bite. Indeed, experience shows that the disease may break out from the first (?) to the eighteenth day after inoculation, and it also demonstrates that in cases of submeningeal inoculation it is extremely difficult to outstrip the dsiease, because the inoculation period is so short that attenuated cord inoculated subcutaneously and far from the central nervous system has no time to do its work. In such cases therefore, of extremely short incubation period, it is possible that the treatment may fail. Fortunately they are rare even where the bites have been received in the face. As for the few cases which succumb even where the treatment has been completed and has apparently had sufficient time to produce its effects, it is extremely difficult to assign the true cause of such failures, but they may perhaps depend upon the special liability of the individuals in question.

The most remarkable point, however, in the whole discovery of this preventive inoculation against rabies is that it has been carried out, the virus itself being still unknown. Not only do we not know how to cultivate it outside the body, but in allowing it to be really a microbe, we can but do so by analogy, for as yet no one has been able to isolate it. Notwithstanding this, however, it is daily being attenuated and made to pass through the various stages of virulence. Unable to cultivate the organism artificially in flasks and tubes, M. Pasteur has been obliged to do so in the rabbit, and so easily and with such perfect regularity are these cultivations in the living animal performed that they are ready each day for use in the inoculations at a specified time and in the condition of genuinely pure cultivations. There is no stronger example of the power of the experimental method applied to medical matters than this one of the prevention of a malady the absolute virus of which is still obscure.

Certain microbes—that, for example,— of anthrax—grow with such tremendous rapidity in the bodies of animals, that at the time of their death their blood contains more parasitic elements than blood-corpuscles. The bacilli form occasionally capillary obstructions, and so act mechanically; but like all living cells they have their vital products, and with such an enormous number of them it is easy to imagine that these very largely modify the nature of their surroundings. The bacillus of anthrax, which is specially greedy of oxygen, draws it from the blood-corpuscles, and produces asphyxia of the tissues; but the greatest source of danger from microbes is to be found in poisonous products which they manufacture. A striking proof of this fact is given us by the diphtheritic bacillus, which, notwithstanding that it grows not in the interior of the tissues but on the surface of the mucous membrane—outside as it might be called, the body—yet causes death, and sometimes with a frightful rapidity In this case there is no invasion of the body nor struggle between the cells, but simply poisoning by the products of a very active parasite growing on the border of the false membrane. It is difficult to find in the body of an animal which has just died of an infectious malady these poisonous products of which we have been speaking, as the complex surrounding of tissues is unsuitable for such researches, and the poisons being only present in very small quantities, the animal during life partly eliminated them from its system; it is therefore in the cultivations in the flasks and tubes that we must endeavor to find these products of the pathogenic activity of the microbes.

The first experiments made on this subject were originated by M. Pasteur. In order to find out what the action of the products of the cholera microbe really was upon fowls, M. Pasteur injected into them a large quantity of a culture which had been absolutely purified from the microbes by filtering it through porcelain. The fowl into which this liquid, absolutely free from living virus, was injected, became sleepy, its wings hung down, its feathers stood up, and, in fact, for several hours it displayed all the symptoms of the disease, after which it recovered. We thus see that the chemical products obtained during cultivation of the microbe are able of themselves to cause the symptoms of the disease, and it is therefore very probable that they are really manufactured by the microbe in the body itself of a fowl attacked by cholera. It has since been shown that many of the pathogenic microbes manufacture these poisonous products, and the microbes of typhoid fever, Asiatic cholera, blue pus, acute ex-

* The members of the Commission were Sir James Paget, Sir Joseph Lister, Drs. Brunton, Fleming, Quain, and Burdon Sanderson, Sir Henry Roscoe, and Mr. Horsley (Secretary).

perimental septicæmia, and of diphtheria all belong to this class. The cultivations of the baccillus of diphtheria in particular become after the lapse of a certain time, so charged with the poisonous substance that an infinitesimally small dose of it causes death to the animals, with all the characteristic signs observable after inoculation with the microbe itself, no one sign being wanted to complete the resemblance, even down to the gradual encroachment of paralysis where the dose has not been sufficiently strong to ensure a speedy death. In infectious maladies, therefore, the cause of death is poisoning, and the microbe is not merely the means of spreading infection, but it is also the the maker of the poison.

By introducing little by little into the bodies of animals these chemical substances produced by pathogenic microbes, such, for instance, as that of acute septicæmia, in such a manner as to avoid causing speedy poisoning, but so as gradually to accustom the animal to its presence, it becomes refractory not only to toxic doses, which would have originally caused death, but also even to the microbe itself; and the immunity which hitherto we could only give by the introduction of a living virus into the body we can now effect by the introduction of a chemical substance into the tissues and these vaccine substances are exactly those which we have observed in infectious diseases as being the cause of death In large quantities they kill, in small they confer immunity. These experiments on vaccination by means of soluble substances without microbes have been successful in various maladies, and we may be allowed to hope that their field of utility will become much wider.

I would here recall to you the works of Salmon, on Cholera; of Toussaint, Chauveau, Wooldridge, Chamberland, and myself, on Anthrax; of Charrin, on the Pyocyanic Bacillus Disease; Chamberlain and myself, on Acute Septicæmia; Beemer, Brieger, Chantemesse and Vidal, on Typhoid Fever; and of myself on Symptomatic Anthrax, which have established the principle of vaccination by chemical substances; so that we now see it may be possible to protect ourselves from one malady by means of another, for which purpose it is only necessary that the microbes of the two maladies should manufacture similar chemical substances. The question now arises, Has the animal, the recipient of a sufficient dose of these products, become refractory in consequence of their being present in the tissues, and thus preventing the growth of the microbe? Upon this point, while we do know that in cultivation the growth of certain microbes is arrested by the accumulation of the products which they form there we must carefully avoid forming a definite opinion as to what happens in the living body upon the basis of a phenomena which have been observed to take place in culture tubes. For example if we take a little blood from a sheep which has been rendered refractory to anthrax, and place in it anthrax baccilli, they will grow there rapidly and abundantly, thus showing that there is in the blood of this protected animal no substance capable of destroying the life of the bacteria. This experiment is, of course, an extremely crude one, since from a chemical point of view there is an enormous difference between blood while still retained within the living vessels, and the same blood drawn from the body and placed in a culture flask. If any positive result were obtained it could only be from an absolutely enormous chemical change in the composition of the tissues.

A more delicate experiment may be performed by injecting into the anterior chamber of the eye of a protected sheep a few virulent bacilli, which, while growing well in the aqueous humor, will confine themselves to that special spot. It is, therefore, evident that in this aqueous humor, notwithstanding its being a part of the animal, and consequently, of necessity, participating in its chemical modification, there is no substance present capable of resisting the local development and vital activity of the anthrax bacillus.

Besides the chemical we have also the physiological question to deal with, as may be seen from the following experiment. If the virus of "quarter evil," that is, *charbon symptomatique*, be injected into the thigh of a rabbit, an animal which is by nature refractory to the disease, no characteristic tumor will develop, and its immunity appears to be absolute. But if now any lesion be first produced in the tissues, either by a blow or by the injection of some caustic substance, and the inoculation be made at that point, then an anthrax tumor will soon appear, and the rabbit, though habitually exempt from the disease, may chance in this manner ultimately to succumb to it, the reason being, of course, that the injured tissues have formed an inert soil for the microbe to start its growth without hindrance. The immunity, therefore, of a rabbit from "quarter evil" does not arise from its possessing in its body any simple chemical substance inimical to the cultivation of the virus, as we see that is only by artificially causing necrosis of the tissues that the virus is able to gain a footing in it.

What then does happen on the injection of active virus into an animal which is refractory? What becomes of the microbes? M. Metschnikoff has taught us that they are soon destroyed, and that the foremost agents of the destruction are the white corpuscles or phagocytes, which swallow up the microbes and digest them, while on the other hand, the white corpnscles in the bodies of non-refractory animals do not swallow the microbes, or that, if they attempt to do so, the latter develop notwithstanding.

Any satisfactory explanation of the problem of immunity should comprise all these facts, and should be based upon the relative importance of the action of the chemical products and the resistance of the tissues. I believe that the best explanation, in fact, consists in considering immunity as the result of the habituation of the cells to the poisons secreted by the microbes.

When the virus begins to develop in the body of an animal subject to the malady it forms its poisons, and when the white corpuscles begin to struggle against them their activity is arrested by this toxic production. The microbe continues to develop and the malady progresses. But in the case of an animal rendered refractory by previous injection of the soluble substances or by inoculation of attenuated virus, the corpuscles have already got accustomed to the microbic poison, and since the small doses given at the beginning of the cultivation of the virus do not impede their activity, they commence the struggle and devour the parasites. But if, as in the experiment with "quarter evil," some cause should prevent this corpuscular intervention, the cultivation of the microbe would succeed, and in this local centre there would soon be a sufficient quantity of poison to render the corpuscles powerless, notwithstanding that these have been previously accustomed to it, or possess natural powers of resistance against it.

There is no means of habituating the system to large doses. It is therefore in the time immediately following inoculation that the decisive battle is waged. Hence the great importance of clearly understanding the importance of the condition of the seat of inoculation, and of the quantity of virulent matter introduced. When once we are thoroughly acquainted with these poisonous substances formed by pathogenic microbes, we shall perhaps be in a position to find antidotes for them capable of paralysing there action even within the tissues themselves; but in offering this suggestion I perceive that I have deserted the domain of fact for that of hypothesis, and it is therefore time I drew my remarks to a close.

It seems to me that the foregoing view of this wide question reconciles the various works upon it, which have been multiplied in the last few years, and though it is possible that it may be modified by time, one thing will remain unchanged, and that is the gratitude of all to him who by his study of attenuated viruses and preventive vaccinations has enabled us to deal successfully with that problem of immunity which has hitherto remained impenetrable.

It is said (*Rev. de Thérap.*) that common soap is an excellent antidote to poisoning by carbolic acid.

MICROBIC LIFE IN SEWER AIR.*

BY ALFRED CARPENTER, M.D., J.P.

The peripatetic world is now and then convulsed by agitations against the smells which come from openings into sewers. "Shut them up," say the most energetic and demonstrative. Sometimes this is effected, sometimes it is not. In the heated discussions which spring up in consequence of some stinking outlet, argument is useless. The loudest exclaimers often gain the day rather by the loudness of their declamation than by the correctness of their reasons.

I propose to consider the question in its bearing upon the public health in a scientific rather than in a partisan spirit.

The reasons for objecting to smells from sewers are sound enough. It has been proved *usque ad nauseam* that sewer smells do promote sickness. It is reasonable, therefore, that those who object to pay an unnecessary doctor's bill, and at the same time incur the risk of losing one of their beloved ones, should be loud in their antagonism to smells from ventilating gratings.

The first point to be determined is the actual nature of the smells, and (secondly) the causes which produce them. There are various kinds of smells, some pleasant, others objectionable, and some decidedly obnoxious, while there is a class which is utterly offensive. This division is not a satisfactory one, because some smells which are grateful to some persons are most offensive to others. We cannot divide them in this way. Another classification might be made according to their manufacture. The odor of flowers and of individuals—human or animal—differ as to their causation from the odor of a gas works, and yet they are allied. These smells arise from chemical changes in the structures of the bodies engaged, which give off minute particles of matter, usually of an ethereal or gaseous character; and being so are endowed with the attributes which belong to gases, each atom having a repulsive action toward every one of its own kind. These odors are more or less rapidly oxidized when discharged into the air. They do not act injuriously upon human beings except so far as they may take away the ozone or free oxygen which is in the atmosphere, and render the air less vivifying than it otherwise would be, and they cover up other and more dangerous smells. The odors from individuals are also distinctive.

Some individuals smell very disagreeably, but the mere smell is not capable of reproducing its kind any more than those from flowers and chemi-

*Address delivered before the Croyden Microscopical and Natural History Club, Croyden, England, April 10th, 1889.

cal decompositions, and are not, therefore, disease-producing. They cannot set up disease in other people. The odors from recently-discharged excreta are allied to this class. They are gaseous, have a tendency to diffuse themselves into space, are rapidly oxidized, and are not in any way Phœnix-like—that is, do not grow another generation of a similar kind. It is true that there are individuals with peculiar idiosyncrasies (as they are called) who cannot bear the smell of musk, or other penetrating odors. I have known one lady who could not stay in a room in which a blooming plumbago was placed without feeling faint, though I could not detect any smell at all from the flower. But these are not cases in point. Stinks of this character may seriously affect a person, but there is *no reproductive power in the smell.* It is this point upon which I wish particularly to dwell, so as to bring before you the true facts and the real nature of so-called sewer gas. The smell of a water closet which has been recently used is very objectionable, but there is no probability of mischief to the next user on that account. It is no more injurious than is rose-water or the kennel of a fox. Fortunately for humanity that it is so. The odors from recent excreta are like to musk; they are ethereal, and tend to diffuse themselves, and so to become oxidized, and are rapidly destroyed. The excreta from a cholera or fever patient at its immediate discharge is perfectly harmless, but it is highly charged with ova, or germs of organic living matter, which are not so harmless. They are not volatile or diffiusible, like to the ethereal smells of musk or of the fox. They require to be separated from the containing liquid, dried, lifted, and carried by currents of air. When so carried they may or may not fall into congenial soils. Any one walking upon the chalk downs or a midsummer day may see the analogue of that which takes place in sewers. The air blowing over the South-downs lifts up the seeds of the various thistles which grow there, and carries them on to arable fields below or out to sea. In the one case they reach a congenial soil and grow, to the discomfort of the agriculturist; in the other they are destroyed. So it is with disease germs from sewers.

There is something more than smell or something less, as it has not been proved that disease microbes have any smell at all, and of course it is only those which cause disease that need be avoided, and the sewer must have a tidal state to enable these germs to find exit at the street openings. This brings me to another point in the case. There are benign microbes as well as malignant organisms. There are microbes which are friends to man, as well as those which are inimical. Take a cubic inch of mould from the Beddington Sewage Farm, and it swarms with millions of living creatures, which are hard at work on a warm day preparing the organic matter in the humus by turning its nitrogen into nitrites ready for use by the vegetable world, if it happens that no radicle belonging to a carnivorous plant is at the moment ready to save the necessity for the change. It has been shown by direct experiment that the formation of the nitrites is due to this cause, and that the development of ammonia which takes place under some other circumstances is also a reaction due to another organism of another kind, the result being acid in the one case, alkaline in another. In the one case putrescence is avoided, a nitrite or other acid being formed; in the other it is hastened, and ammonia results. Here we have another line. How does this alteration come about? The answer is that it comes about very much in the earth or in sewers as it does in the air; let oxygen abound, especially ozonized oxygen, and nitric acid tends to form. The organisms which cause this tendency grow as vigorously as does the yeast micrococcus in a solution of sugar. When the air is highly charged with electricity the rain which decends in a thunder-storm contains an appreciable portion of nitric acid. But let the presence of oxygen be diminishing, and compounds of nitrogen form which are alkaline, and putrefaction is then promoted. A set of microbes come into being which are sometimes inimical to humanity; but here again we see the overruling hand of a Divine Providence, for one of the products of putrefactive agency—viz., sulphuretted hydrogen, is completely destructive to those organisms that especially revel in the humors of animal life. This result is shown in the work of the doctor. It is our duty as students to do some dissecting in our student days, and we may be requested to do so at any time by the coroner. It sometimes happens that the operator wounds himself. I have experienced this while making post-mortems upon those who have only been dead for forty-eight hours, more or less. This class of wound is always very serious, for disease germs may be transplanted; but a wound which is inflicted at the end of a dissection, when putrefaction is established, perhaps six or eight weeks after the death of the subject, has very little danger in it, for the disease-producing microbes, if they had been present, have all been destroyed in the process of the putrefactive action which has taken place. This result happens in sewers as well as in dissecting rooms.

There are two classes of microbes which have to do with destructive agencies—the moulds, which belong to the family of fungi, and the true microbe or schizomycites order. If air be sparsely admitted the moulds predominate, and there is a tendency to acid formations, carbonic acid, butyric, nitrous acid, etc.; but if it is all but excluded the schizomycites are most numerous, and it is on this fact that ventilation must be good or not at all. We now reach a point in our inquiry which is of importance. Microbic life is connected with de-

composition of organic matter containing nitrogen in its constitution. Decomposition is accelarated or checked by outside circumstances, such as the presence or absence of air; it is also influenced by temperature, by moisture, and the presence or absence of other agencies, as is proved by the action of antiseptics and germicides. We may even advance a step further and say that without decomposition there is no development of microbic life; this is an important factor in the consideration of sewer air.

Let us now inquire as to the nature of the decomposition which promotes the formation of these organisms. As experience is gained we become more and more convinced that there is no known means whereby any such organism arises without the previous introduction of a parent germ of the same kind; that the spontaneous origin of such germs is not likely to happen, though no doubt in the case of some kinds of disease germs, such as that of typhus-fever, the dormant organism is an ever-present commodity, as much as that which gives rise to the blue mould in cheese. It is also established by experiment that a germ may be made more malignant by cultivation, or by cultivation may be deprived of its malignancy. It is upon this fact that vaccination is found to be prophylactic against small-pox, and Pasteur is able to prevent the spread of splenic-fever among cattle, and take out the sting of hydrophobia, by giving rise to a disease of a similar but of a milder type, though in the last-mentioned this may be only a choice of two evils.

Let us now ask whether any microbes are to be found in sewer air? Secondly, whether they are necessary parts of a sewage system? Thirdly, whether being there they are benign or malignant? And fourthly, whether it is possible for those which are benign to become malignant by cultivation in the sewer or outside, and *vice versa*.

My attention was first attracted to sewer air in the years of 1853, 1854, and 1855. We had a ventilator fixed to the sewer at the Friends' School in 1854, which was then in Park Lane, Croydon. One of the teachers, who was of an inquisitive turn of mind, got on the roof and smelt at the opening, with the sequence of a severe attack of sickness. It was the first case in which I was able to draw a distinct inference as to cause and effect with which I came into contact, though I was then satisfied that sewer gas did cause much illness in the town. It was not long before that event that I had ventilated the soil-pipes of my house, then in the Dingwall Road, the first ventilator of the kind which was put up in Croydon, and by that means, I think, saved my household from the invasion of typhoid-fever, which affected my neighbors in every house in that road right and left of me. From experiments carried out at that time in various houses in Croydon I was satisfied as to the dangerous character of sewer air when coming from unflushed, unventilated sewers, and I determined to do my best to get the Croydon system of sewers both flushed and ventilated. It was not, however, until after the year 1865, with its distressing events, that the local authorities would agree to adopt the principle that every individual house should have its own protector from the invasion of obnoxious gases. About that time the experiments of the German scientist, Professor Keber, of Dantzic, who followed up Erzenburgh's discoveries, had made out the connection between living organisms and disease, such as that which produced splenic-fever in cattle and relapsing-fever in human beings. I began my own experiments on sewer air about this time, and tried to get some facts from personal observation which should be worthy of a place in the literature of this society. I had proved to my own satisfaction that *potato blight* was caused by a mould fungus (the *Peronospora infestans*), though I did not, for one moment, claim to be the discoverer, but only verified that which was suggested by others. I had learned that *dry rot* resulted from another fungus (the *Meruleus lachrymans*). I detailed my observations upon *Peronospora infestans* in the *Times* newspaper, with the result of drawing upon me the anger of those who were working in the same field, perhaps in a more conclusive measure than I did, but of whose work in that particular field I was, like most other people at that time, quite unaware. I followed out my observations upon sewer air by suspending microscopic slides in those positions in which sewer air was distinctly found to make its exit. It was while I was so engaged that I made out that a number of Mr. Latham's charcoal baskets were inserted into openings into which air sometimes entered. These baskets had been provided to obviate the mischiefs from sewers by purifying the air by means of charcoal; some were openings for the admission of air rather than as exits. This was especially the case with two or three openings at or near to the Zion Nursery, which had been complained of as nuisances, but which were conclusively proved to my own satisfaction to be completely innocent of offence, for air went in instead of coming out, though it is quite probable that there was a reverse action occasionally. It was evident to me that the smell then complained of came from some other source than the sewer grating. The examination of the slides that I placed in the gratings showed a variety of organisms such as has been found in the wards of a large hospital, but I could not recognize any that I could accuse of being typhoid or other disease germs, which were the organisms I was more especially searching for. The arrested organisms were vibrios, micrococci, and vegetable germs, innocent of malignant action on man, as far as our knowledge then extended. I was not

at that time aware of the plan of cultivation by means of gelatine solutions such as are now so successfully used in similar investigations—some of these I exhibited on a former occasion to the members of this society. I exhibited also some specimens and diagrams prepared by Dr. Heron, showing these developments, when I last addressed the society upon the subject of disease germs.

My last attempt at investigation in this direction was made upon a ventilating opening at the side of my garden upon Duppas Hill Terrace. The results of that investigation have been published in St. Thomas' Hospital reports for the year 1883. They involved a medical question which I was anxious to submit to the medical profession, and did not detail them to this society. The substance of my observations, which were carried on in the winter of 1880-81, was that certain smells came from that ventilator which varied in nature as well as in intensity. Sometimes the smell was excessively offensive from the presence of sulphide of ammonium; at others there was an ordinary sewer air smell; and at others a sweet, hay-like odor which could not be called distinctly offensive. I never smelt that particular smell at the sewer without getting a relaxed throat and a cough in the next day or two, and on two occasions a distinct feverish attack lasting for forty-eight hours. There was one point of importance in the microscopical examination of the slides which I suspended in the ventilator—viz., that whenever the sweet, hay-like smell existed some very minute highly refracted organisms, smaller than the ordinary micrococci, were seen, which were always absent when the sweet hay smell was perceived. I never suffered from relaxed throat after inhaling the sweet hay smell, and I came to the conclusion that the highly refractive particles were the germs which gave me the relaxed throat, and that they were non-existent when putrefaction was thoroughly established. If I had known anything of gelatine cultivation then, I should certainly have cultivated those germs and tried to prove their connection with somewhat similar organisms which are found in diphtheria and croupous or infectious pneumonia. (Some cases of these diseases did exist on Duppas Hill about that time.) It was while making these investigations that I discovered a defect in my own left eye, which led me to give up microscopical research, and which has since disabled me from assisting at the society's microscopic demonstrations.

Since that time I have been educating myself by the microscopic studies of others in the same direction. It has been clearly proved by experiment that actual putrefaction is generally destructive of the life of disease germs, so that the only result which need follow the inhalation of the offensive odors from sewers is the necessity of calling the attention of the local authorities to the fact that the sewer is a sewer of deposit, and before the stink escaped might have been a source of danger to those passing by that locality. We may depend upon it that it is not the sewers which stink that are the most dangerous, though before putrefaction was complete it was possible that there might have been disease germs escaping from that particular opening, though I shall show presently that they need not excite serious alarm.

(To be continued.)

THE MOODS OF THE SANE.

It has been said that, "speaking scientifically, we cannot affirm that anybody is perfectly healthy." If the pathologist can detect the symptoms of disease in the most apparently healthy body, no less certainly can the neurologist indicate subtle manifestations in the mental states of the sanest amongst us, which serve to warn us how perilously near we may all come at times to mental derangement. Just as it is impossible to set up a standard of bodily health of universal application, so is it with the mind; one man's measure of mental health cannot be taken as that of another. "Health" and "whole," are both derived from the same Anglo-Saxon term, *hâl*, and no one man has the completeness of either bodily or mental soundness at any one time. We may be sane (safe, sound), but at best only relatively, and the varying moods of our sanity may often be strangely like the true persistent phases of the acknowledged alien. There are few of us who have not moments of depression or abnormal excitement, which, if unduly prolonged, would make us the objects of unpleasant attentions at the hands of our friends, and not one of us can say at any time that we shall never find those unhappy moods persist. Apart, however, from any such painful forebodings, it is an interesting subject to consider some of those mental attitudes of the perfectly sane, and trace their causes to their actual source. There is a posthumous paper in a recent number of the *Neurologist*, by Dr. Milner Fothergill, which deals—in the pleasant and instructive manner for which its distinguished writer was so celebrated—with this interesting question. If we would rightly know the workings of the human mind in their varied conditions, we must study them, as the brilliant author tells us, in the insane asylum. What angry man amongst us may not find food for reflection, and learn the habits of self control from the incoherent ravings of frenzy? What garrulous, self-centred man may not be rebuked when he sees his infirmity a little magnified in the flow of the talkative maniac?

The delusions of the over-sanguine, the groundless fancies of the visionary, the baseless conceptions of the jealous, and the morbid religiosity of the despondent man, all find their legitimate pro-

jections in some fixed conditions common enough in the dread abodes of the insane, and all have lessons for us. The asylum held up the mirror to the observant eye of Dr. Milner Fothergill, showing him our natural and healthy moods when perverted by disease, mismanagement or neglect, into forms of mental disorder. A bad habit or the dominance of an unfortunate predilection may disturb the balance of an otherwise healthy mind, as effectually as the touch of a magnet on the balance wheel of an exquisite watch will impede its regular motion.

How easily is our mental balance disturbed! A single serious reverse may blight a man's hopes for life, yet with another and a sterner habit of thought the advancing phthisis of a Richard Jeffreys will not have the least ill effect. What a variety of moods are caused by food alone! A hungry man can scarcely be termed quite sane in comparison with one who is comfortably digesting the dinner of one of the "city companies."

A cynic might turn upon us, and declare that the man who has just dined well evidences his cerebral disturbance by the ease with which a liberal subscription can be obtained from him, and that his less replete moments are his prudent and normal ones. When the Church desired to reduce us to a proper sense of our deserts and shortcomings, she bade us fast, and as fasting has always been associated with penitence, it might be argued by a theologian that we are more truly our real selves when hungry than full. Andrew Boorde, themonk-physician, in his quaint book, *The Dyetary of Helth*, rather inclines to the "city company" idea of sanity, when he advises his readers to "Fyrste lyue out of syn, and folowe Christes doctrine, and than vse honest myrth and honest company, and vse to eate good meate, and drynke moderatly."

Shakespeare thought that the "lean and hungry" looking Cassius must naturally be dangerous, and the general testimony of English writers at any rate is to the close connection existing between fat folk and good temper. Dr. Fothergill was a grand example in himself, and we can picture the relish with which he wrote, "When the brain is well fed, it has a sense of well being; when it is ill-supplied with blood, it is irritable, miserable, and despondent." But alas! the very process of feeding the brain and making general contentment in the body too often vitiates the blood, and as the old writers would say, "disturb the humors." The good feeder gives a standing invitation to the gout, and the gouty material in the blood makes a man "choleric," that is to say, hasty and irritable. The over-fat, amiable man has fits of "the blues," he often descends to the melancholy mood, and then as old Burton says, "he is the cream of human adversity, the quintessence, and upshot." A disordered liver has made many a one think he has sinned the unpardonable sin, and a good purge has often lifted a burden from the conscience as heavy as that of Bunyan's Pilgrim. Dr. Fothergill thought that the atmospheric conditions of Bath and Bournemouth are distinctly answerable for their religious tone, whilst the tonic effects of Clifton have much to do with its intellectual activity. It would be interesting to compare Margate and Brighton with the special moods of their visitors; but these theories may easily be pushed too far, and we might find ourselves inquiring what are the characteristics of Monte Carlo which foster the gambling spirit, and what makes the Neapolitans so light-hearted and frivolous. Perhaps diet has even more to do with the moods of the sane than atmospheric conditions. An old adage says that, "he who drinks beer thinks beer," but there is beer and beer. The German philosopher stimulates his brain to the highest intellectual exercises on beer, while our working classes deaden their not over active cerebral organization on something called by the same name. Whether we are as sane as we might be in creating any sort of mood by alcohol, is extremely doubtful, for most competent observers agree that the best sorts of intellectual, as of other work, cannot be done under its influence. "The accursed hag dyspepsia," as Carlyle called it, has been answerable for a good deal of the gloomier theology of the past and present. What a victim must have been that monk who wrote *Hell Opened to Christians*, with its appalling pictures of demons riving bolts into men's skulls, and toasting them on great forks! The author of *The Imitation of Christ*, on the other hand, must have been blessed with a good digestion, and a liver which gave him no "moods." His biographers say he was "a placid, kindly, fresh-colored old man"; and, indeed, his books reveal all that. Probably our best moods are always tinged with a shade of melancholy. Montaigne says, "the most profound joy has more of gravity than gaiety in it"; and Dr. Fothergill wrote of the mental attitude of "feeling delightfully low spirited." "The rainbow of our thought life," as the author of *Thorndale* so beautifully expresses it, "is made of joy and tears, the light and storm." The dark and the bright threads of our life are so interwoven, that our healthiest attitude can never be unalloyed joy. The highest music, painting, and poetry most truly express the sanest moods of man when they exhibit joy chastened by the "sadness which is not akin to pain."

The lesson which we should endeavor to learn from a study of the moods which so easily possess us is the importance of a firm will-control acting like the inhibitory nerves. If our mental states are so often caused by pathological conditions, it is no less true that the mind can control the body; and the man or woman who, in popular pahaseology, "gives way" to his moods, runs imminent

risk of becoming their slave.—Editorial in *Br. Med. Jour.*

A CLINICAL LECTURE ON IRRIGATION OF THE STOMACH.

This morning, gentlemen, I wish to call your attention to a therapeutic procedure in the management of certain gastric diseases which, I have reason to believe, is not resorted to as often as it should be. I refer to irrigation of the stomach, or, as it is sometimes called, lavage. A careful examination of our principal medical journals for several years back, in addition to conversations on the subject with a considerable number of physicians in active practice, convinces me that this method of treatment is suffering from an undue neglect. It was introduced, about twenty years ago, by Kussmaul, who employed it in cases of gastrectasis, or dilatation of the stomach, and a majority of those who have since adopted it have limited its use to that particular affection. There is no doubt, however, that its range of application is capable of much greater extension. Indeed, I have no hesitation in saying that it should be given a trial in every case of chronic dyspepsia in which medicines have failed, provided there is no contra-indication to its use. We are safe in assuming that most of these patients have more or less gastric catarrh, and, at any rate, we can do no harm by the exceedingly safe and simple operation which I will show you presently. The chief advantages of lavage are as follows: 1. Owing to a loss of peristaltic power, often present in simple dyspepsia and always in dilatation, the stomach is unable to rid itself properly of ingested material until long after the period of normal digestion. This condition has been termed by Rosenbach, insufficiency of the stomach. This stagnating and fermenting material, in some instances, will remain in the stomach for days at a time, as shown by the vomiting of substances known to have been ingested a long time previously. The stomach is liable to become greatly irritated in this way, and inflammation may even be developed. By the timely employment of the tube all this material may be washed out, and the stomach thoroughly cleansed and allowed a period of perfect repose. We may thus in many cases restore the lost elasticity and muscular contractility of the organ. 2. In cases of simple gastric catarrh it relieves the stomach of the superabundant mucus, and perchance bile, that may be present. 3. By reason of its safety and simplicity an intelligent patient may be taught to use the tube himself. Washing of the stomach should be performed at least six or eight hours after eating, when the organ is supposed to be empty. For this reason an early morning hour before the first meal is commonly chosen. It should be performed every day at first, then every other day, dropping to once a week, and finally discontinuing altogether. Tepid water should be used, to which, if desired, may be added certain medicaments—bicarbonate of sodium, carbolic acid, creasote, hyposulphite of sodium, Lugol's solution, etc. The prognosis is, of course, most favorable in cases of simple dyspepsia and early dilatation. In old cases of gastrectasis we can expect palliation only. The best results are seen in cases of gastric insufficiency, the criteria of which I have mentioned.

With these preliminary remarks, we will now devote ouselves to the patient who presents himself. He informs us that he is thirty-four years of age and a brass-moulder by occupation. On February 21st he came under my observation, giving a history as follows: For about a year past he had been suffering from flatulence, pyrosis, obstinate constipation, and cardiac palpitation. The latter symptom especially was so severe and constant that the patient was firmly fixed in the belief that he had heart disease. He had applied to several physicians, but had failed to obtain relief. I found him in a very melancholy frame of mind, as he had begun to lose hope of ever getting well. He was put under treatment and various remedies prescribed for the relief of his symptoms. There was no improvement, however, and at the end of two months he was rather worse than at the beginning of my treatment. On April 24th I resorted to irrigation of the stomach, and have continued it at gradually increasing intervals since that time. For the past month it has been performed at intervals of two weeks, and to-day I think is about the last time it will be required. If you will question the patient, you will learn that the symptoms began to abate immediately after the first washing, and his improvement has continued steadily ever since. He has gained in weight, his appetite is greatly improved, and he has a regular daily evacuation from his bowels. He has not been troubled for three weeks with cardiac palpitation, and the pyrosis has disappeared entirely. This improvement I attribute to the periodical irrigations of his stomach, although certain dietetic and hygienic precautions have doubtless had some influence. His nourishment has consisted chiefly of fresh milk and tender beefsteak, broiled underdone, chopped fine and thoroughly masticated, with stale or toasted bread. Latterly he has been allowed a mutton-chop, the white meat of fowls, and an occasional lightly cooked, poached egg. Saccharine, amylaceous, and fatty substances have been excluded as far as possible. Such notorious dyspepsia breeders as boiled cabbage, rich cake, pies, strong tea, fat pork, etc., have been given a wide berth. The patient has been allowed a glass of claret for dinner, but no other stimulant whatever. The

only medicines taken since employing lavage have been a little bismuth and pepsin, with a few grains of aromatic powder to correct occasional spells of flatulence occurring in the intervals of the irrigations. I may say that the patient has been exceedingly tractable, and, I believe, has obeyed my instructions to the letter.

The instrument I employ is a large-sized soft-rubber tube about thirty inches in length, and having two eyelet holes in the distal extremity. It is exactly similar to a large-sized Jacques urethral catheter, being of the size marked 19 (American scale) by Tiemann, of this city. Some prefer a longer tube, having a funnel connected with its proximal extremity, known as the Faucher tube, but I prefer the one I have here, attaching it by means of a short glass cylinder to the hose of an ordinary fountain syringe, which I hang on a convenient hook in the wall above the level of the patient's head. After anointing about twenty inches of the distal portion of the tube with vaseline, I pass it back to the patient's pharynx, instructing him at the same time to swallow. The end of the tube readily engages in the upper extremities of the œsophagus, and by a little gentle continuous pressure it gradually passes down into the stomach. When I first passed the tube in this case there was considerable retching and even a little vomiting, but by repeated use the patient has acquired a toleration for it, and you will notice now that it produces no sign of annoyance or discomfort. In some cases we will have to exercise no little patience and perseverance at the first attempt at introduction. Sometimes the patient will vomit the tube as quickly as it is placed in position. Such cases are not common, however, and tolerance is usually quickly acquired. In obstinate cases a four-per-cent. solution of cocaine may be applied to the pharynx and fauces by an atomizer before introducing the stomach-tube. Having the tube *in situ*, I now connect it with the syringe, at the same time filling the latter with simple tepid water, which, as you see, passes rapidly from the bag into the stomach. After I allow about two pints to run in, the patient expresses a sensation of fulness in the region of the epigastrium, so I cut off the flow by means of a stop cock on the hose of the syringe I now disconnect the hose from the syringe and depress the former, holding it over a vessel placed ready to receive the fluid from the stomach. A reverse current is immediately established on the principle of the siphon, and the contents of the stomach pass very readily through the tube into the receiver. There is no solid matter in the stomach, as the patient informs us that he took nothing for his breakfast except a cup of chocolate with a little milk. You will notice that the flow is occasionally interrupted and stops altogether at times. This is due to flocculi of phlegm and mucus in the stomach, which engage in the tube and arrest the current. This mucus was very abundant at first, but has progressively diminished until now it amounts to very little. It may be driven through or disengaged from the tube by instructing the patient to bear down; by gentle but firm pressure over the epigastrium with the hands; by shifting the position of the tube, withdrawing it slightly, and returning it; or, finally, by connecting it with the syringe again and allowing more water to enter the stomach. While the water is flowing into the stomach it is a good plan to walk about the room with the patient, holding the syringe on a high level and instructing him to lie down a little while and to agitate his body in such a way that the fluid reaches every portion of the gastric mucous membrane. I continue to replenish the water and allow it to flow out again until six or eight pints have been consumed. You will see that it now returns from the stomach perfectly clear and contains no mucus whatever. In the last instalment of water I dissolve fifteen or twenty grains of salicylate of sodium as a safeguard against renewed fermentation. Just here I will mention another application for irrigation. We now know this man's stomach to be perfectly empty. By percussion of the epigastrium we may, if we desire, ascertain the condition of affairs in this region, carefully noting the areas of tympanitic resonance, dullness, etc. Now, if we introduce another pint or two of water and percuss again, we shall find a new area of dullness which corresponds to the lower border of the stomach. If we find this line persistently an inch or two below the level of the umbilicus, it is fair presumptive evidence of gastric dilatation. By repeated examinations we can make out any changes occurring in this level and thus estimate to some extent the value of treatment. If the stomach is regaining its lost muscular power and elasticity, the lower border will gradually return to its normal position just above the umbilicus.

Feeling convinced that this patient's stomach is thoroughly cleansed, I withdraw the tube gently and the operation is completed. In the present case as in others I have treated by lavage, the operation is followed within a few minutes or half an hour by two or three watery evacuations. This has occurred even in cases of obstinate constipation. It is doubtless caused by a certain quantity of water escaping from the stomach into the duodenum and passing through. It is probable also that in some cases the lower end of the tube passes through the pylorus if we introduce it too far, so that the duodenum receives a considerable proportion of the fluid. At any rate, this watery evacuation of the bowel is probably a favorable occurrence, and is usually regarded in that light by the patient. A gentleman of the class asks whether the dietary precautions in this case may not be responsible for

the favorable result. While by no means underestimating that part of the treatment, I think a sufficient answer to the question is found in the fact that the same restrictions were observed for weeks before employing lavage, but with no improvement whatever in the symptoms. Before dismissing the subject I should state that there are certain contra-indications to the use of the tube. It should not be used: 1. In cases of aneurism of the great thoracic vessels. 2. In cancer of the œsophagus or cardia. 3. In cases of recent hæmatemesis, hæmoptysis, or gastric ulcer. 4. In very nervous or hysterical patients, and in cases of great debility and prostration with a tendency to syncope. Of course, in cases where we wished to secure an immediate evacuation of the stomach, as in cases of poisoning, we should have recourse to the pump. —James K. Crook, M.D., in *N. Y. Med. Jour.*

COUNTER-INDICATIONS TO THE SUSPENSION TREATMENT.

Since the treatment of progressive locomotor ataxy, and other affections of the nervous system by suspension was advocated by Dr. Motchoutkowsky, and sanctioned by Dr. Charcot, it has spread rapidly in every direction and is now used not only by the profession, but also by the laity, in such an indiscriminate way, that a few words as to the counter-indications for this treatment will not be amiss. Dr. Charcot has, in one of his lectures, indicated the cases in which suspension is beneficial.

First of all, it seems only prudent that the application of this treatment should always be confined to a physician or an experienced assistant. It has been customary in city practice for the physician, after having himself conducted the suspensions a number of times, and explained the modus operandi to the relatives of the patient, to leave the succeeding treatment in their hands. The result has been, up to the present time, three fatal accidents, which would have been averted if a physician had been present. The history of these cases is as follows:

The first is the case of a man, reported by Dr. Vincent, and a woman, both of whom succumbed in the same way; they had suspended themselves according to the recommendation of an American physician, when, of a sudden, the bandage under the chin slipped and they were strangled to death. The third case is reported by Dr. Blocq. The patient was suffering from tabes dorsalis, showing some signs of general paralysis, and the suspension treatment was instituted. The first few applications were made by Dr. Blocq himself and were followed by some amelioration; the succeeding treatment was left to the patient to carry out, without the surveillance of the physician. Shortly after, the doctor learned that after a suspension the sick man was attacked by coma, and died 24 hours afterwards without regaining consciousness. It could not be learned whether he died of an apoplectic attack, or whether it was the result of an accident. Several more or less unpleasant accidents have happened to patients treating themselves, and serious ones may be looked for, all of which shows the necessity of the physician's supervision each time. The counter-indications may be grouped under three headings; 1. The state of the general health. 2. Certain affections of the nervous and cardio-pulmonary system, and 3. Certain local lesions.

1. Organic debility, be it from the nervous affection itself or from any other cause, is one of the least favorable; anemia, so often the cause of general debility, especially if accompanied by disorders of the circulation; œdema, which makes the usually painless suspension exceedingly painful, as has been noticed by the auther; and obesity, which is not in itself a counter-indication to the treatment, but which makes surveillance indispensable and necessitates greater precaution.

Weir Mitchell has constructed an apparatus in which the axillary pieces are replaced by supports to the elbows, pressed close to the sides, and which is furnished with a double system of blocks, the one for the elevation of the body by the elbows, and the other for the traction on the head alone. This apparatus has the advantage of not compressing the axillary vessels and nerves, and of graduating the extension of the head, allowing the operator in this way to lengthen or shorten the duration of suspension without immediate inconvenience.

2. It has been observed that during suspension the respiration is more frequent, and at the same time the movements of inspiration and expiration are diminished in their amplitude; cases of phthisis pulmonalis, emphysema and chronic affections of the air passages in particular, were much oppressed; would this counter-indicate suspension? The same can be said of the majority of cardio-vascular affections; athernatous degeneration of the arteries contra-indicate, because rupture of the same may be precipitated. Suspension accelerates the frequency of the pulse and augments arterial pressure, consequently this treatment is not recommended in patients subject to congestion or to apoplectic attacks. It is important to examine the sick with reference to this point. Mitral and aortic lesions forbid the use of suspension, because of the dyspnœa, somnolence and tendency to syncope to which these affections predispose.

Of the nervous affections which counter-indicate this treatment we know as yet very little; vertigo seems to be one of them, although Dr. Charcot recommends that the operator speak to the patient during the suspension, which will often do away

with the dizziness. It is of the utmost importance to minutely observe every symptom at the first trial of the treatment, and to act accordingly.

3. Before applying suspension, examine the condition of the teeth, determine whether they will withstand the pressure of the chin-bandage Also ascertain if the patient is subject to spontaneous fractures, often present in certain cases of tabes; if this tendency be present, abstain from the suspension.—*Le Bulletin Med.*—*Weekly Med. Rev.*

LATENCY OF ATAXIC SYMPTOMS IN CASES OF OPTIC ATROPHY.

It has been long noted that optic atrophy, when present in locomotor ataxia, appears generally among the earlier symptoms. Indeed, given a case of optic atrophy without recognizable cause, the chances are altogether in favor of characteristic pains, bladder irregularities, or other symptoms, appearing later, which, even if not marked, will enable us to place the case under this category.

Charcot emphasizes the fact that most women coming to the hospital with amaurosis develop sooner or later, in the majority of cases, ataxic symptoms, perhaps ten, perhaps fifteen years later. In one case cited, the blindness was followed in ten years by shooting pains and girdle pains, these symptoms remaining stationary for ten years more, when appeared symptoms of muscular incoördination.

Gowers mentions cases of his own in which optic atrophy preceded ataxia by sixteen and twenty years, and quotes a case reported by Buzzard, in which atrophy existed fifteen years, associated only with lightning pains and loss of knee-jerk.

In his recent text-book, Gowers has stated that atrophy of the optic nerve so universally appears early in the disease, that, after the ataxic gait is fairly established, it is of rare occurrence. Conversely, he states that when optic atrophy has become developed, it is common for the other symptoms of locomotor ataxia to remain in abeyance. To use his own words, "In a large number of cases, the ataxia never comes on, the spinal malady becoming stationary when the nerve suffers." If this is true, its bearing on the question of prognosis is of considerable import. It is certainly something to be able to assure a patient, at any stage of this disease, of his probable, or even possible, immunity from any of its distressing symptoms. In the matter of diagnosis, also, the subject is worthy of consideration.

I have looked through the records of sixty-six consecutive cases of locomotor ataxia,—fifty two seen in the Neurological department of the Massachusetts General Hospital, and fourteen in private practice,— in the hope of throwing additional light on this branch of the subject. The result is as follows: Out of the sixty-six cases, the diagnosis, optic atrophy, was found in fourteen; and six more had decided loss of eyesight. In these six there was no description of the optic nerve given in the notes, which prevents their being classed with certainty under the cases of atrophy, although undoubtedly some, and perhaps all, of them belong there. Out of the fourteen cases of optic atrophy, the degree of incoördination was mentioned in eleven. In three of these eleven, there was no ataxia; in five, it was slight; in three only was there marked ataxia. In the eight cases in which the ataxia was slight or wanting, the duration of the disease was respectively, two, three, four, seven, eight, ten, twelve and twelve years. In nine of these fourteen cases, the knee-jerk was noticed. It was present in one or both legs, in four out of the nine; and in one other case, where the loss of eyesight was so considerable as to leave little doubt that optic atrophy was present, the knee-jerks were normal. In all of the cases the disease was well advanced. These figures, while far too incomplete to be regarded as statistical, are still of some interest, sufficiently so to encourage further investigation.

The noticeable features are the large proportion of cases in which the knee-jerk was retained in one or both sides, and the large proportion in which ataxia was either absent or very slight. With regard to the ataxia, this has been already considered by neurologists as a symptom not necessary to the diagnosis, hence the tendency to restore the name "tabes dorsalis" in preference to locomotor ataxia. The point to which I would call attention is that to which Gowers has practically alluded, namely, that it is the cases in which optic atrophy is present in which we may expect to find the absence or indefinite postponement of ataxia. Again, with regard to the preservation of the knee-jerk, the loss of knee-jerk in locomotor ataxia is, as a rule, one of the earliest and most constant symptoms, a fact which lends considerable significance to its preservation in four out of nine (probably five out of ten) cases where optic atrophy was present. The practical bearing of these facts is to assist us in both diagnosis and prognosis. As regards diagnosis, they would lead us to place with confidence under the head of locomotor ataxia certain cases of optic atrophy which we may have hesitated to place there on account of the presence of knee-jerk and absence of ataxia. As regards prognosis, they would lead us to predict a comparative latency of the motor symptoms of the disease where optic atrophy has become pronounced.

The constancy of one symptom was noticeable in the cases with optic atrophy as in those without it, namely, the Argyle-Robertson pupil. This symptom, together with characteristic pains, may,

it seems, be looked for early in this class of cases, however latent the motor symptoms. If the Argyle-Robertson pupil were dependent on optic atrophy, it would be expected particularly in these cases; but its constancy in the other cases shows it to be independent, at least in general, of the lack of conducting power in the optic nerve, a fact already well recognized.

It is worthy of note, that, out of sixty-six cases taken indiscriminately, there were fourteen with the diagnosis of optic atrophy, and several more in which it was probably present. Statistics on this point vary greatly. Erb found eight cases in about seventy, while Topinard noted disturbance of vision in forty-nine out of one hundred and two, and Cyon found sixty cases with amblyopia and amaurosis out of two hundred and three. The statistics of more recent observers also vary markedly. The figures of oculists would naturally run higher than those of neurologists. Gowers states that the proportion is much less than is generally believed, certainly not exceeding one case in ten.—Dr. Walton, in *Bost. Med. & Sur. Jour.*

MEDICAL NOTES.

In the treatment of *ovarian neuralgia*, Prof. Bartholow recommends the tincture of gelsemium, given in 5-drop doses t. d., and gradually increased till double vision results.

In the treatment of *fibroids of the uterus* by ergot, where the stomach rebels, give the remedy hypodermatically; it may be continued for months in this manner. (Prof. Parvin.)

In cases of *temporarily irreducible hernix* (non-strangulated), Prof. Brinton advocates the application of ice bags, using at least three layers of flannel over the surface, and only keeping the cold applied one-half hour at a time.

In cases of *chancroid* which are excessively painful, Prof. Gross directed the following wash:

℞—Chloral hydrat., ... gr. viij.
Aquæ destillat., ... f ℥ j.—M.

Sig.—Apply on cotton.

In the *administration of cod-liver oil*, Prof. Da Costa recommends the following modes: either floating the oil in its purity on ice water, or taken in carbonated water made agreeable by the addition of a little syrup.

For a man at the clinic, with *hyperæsthesia of the stomach*, Prof. DaCosta directed a milk diet exclusively; ʒ ij sodii phosphas in the morning, and the following *ter die:*

℞—Acidi arseniosi, ... gr. $\frac{1}{60}$.
Ext. cannabis indicæ, . . gr. $\frac{1}{8}$.—M.

In the treatment of a *chronic ulcer*, free the bound-down edges, paint the surrounding tissue with equal parts of alcohol and iodine, touch the surface thoroughly with solid nitrate of silver, put the patient to bed, and wrap the limb up in a solution of lead water and laudanum. (Prof. Gross.)

For a case of obstinate *sciatic rheumatism*, at the clinic, Prof. DaCosta ordered the following, to be taken *ter die:*

℞—Sodii salicylat., ... gr. xv.
Tinct. aconiti, ... gtt. j.—M.

and also directed that, in case this failed, injections of osmic acid should be used.

Coll. & Clin. Rec.

MEDICAL TREATMENT OF THE INTESTINES.—In concluding an article on the subject of intestinal obstruction (*Medical Press*) Prof. H. Nothnagel says:

"I may briefly state in one sentence all the treatment I can recommend as an hospital consultant: Absolute abstinence from food; induce the peristaltic action from below; still it from above; and, above all, avoid purgative medicines. Further I know of nothing to add for the guidance of others.

"As regards other methods of treatment, very little can be said, but there are one or two forms of recent origin which I cannot pass without a remark. Washing out the stomach was introduced by Kussmaul as a remedy, but past experience of this form of treatment has nothing particular to commend itself, and has been of very little use. One advantage in using it is that it is a harmless application, and there is not any danger attending its use. The clyster I can always recommend as a most effectual remedy in all forms of fecal accumulations, but it is not suitable for fecal vomiting where there are inflammatory conditions. The object of a large clyster is to break up large fecal masses, but this is to be avoided where there is a tender bowel. Electricity is another remedy which has come into recent favor, and is not without merit. When using this agent it is recommended that both poles be placed over the tender or painful part of the bowel, or one pole introduced into the bowel. The successful cases from this treatment are so few that no opinion can be vouchsafed. There are other drugs, like belladonna, nicotine, and others that might be named, but there is one regularly prescribed drug that might be noticed. There was a time when every case of stoppage of the bowel must be drugged with mercury, but the greater number of the observers of this treatment have spoken very adversely of it. No doubt an individual case has arisen where success may be attributed to the drug, but these are very few, and leave us in grave doubt when it should be used at all. If the tradition of this drug tempts you to its use in any form of vomiting, I beg to consign it to your charge with care, and trust that you will

carefully use your own judgment in applying the drug where the least danger exists. In concluding my observations on the medical treatment of the bowel, I felt it my duty to say that the most severe cases that we meet in our daily practice are frequently beyond the reach of our medicines, when arising from locking of the bowel, and properly belong to the region of operative surgery for their relief."

Some Hair Recipes.—Lassar, of Berlin, in 1882 published, in connection with our fellow-countryman, Bishop, an account of some experiments tending to show that alopecia præmatura was contagious, and could be cured by antiparasitics. In this article ("Therap. Monatsheft," 1888, No. 12) he still insists upon the contagiousness of ordinary baldness and its spread through the agency of barbers, and the employment by several persons of one comb in common. Even though as yet no definite parasite has been found in alopecia, Lassar believes that there is one and that it will be found in time. He does not believe that alopecia areata is a neurosis, though he allows the possibility of it in a few cases, but does believe that most cases are from contagion. In the past few years he has met many hundreds (?) of cases of alopecia areata, many of which have been in relatives, patrons of the same barber-shop, school-mates, or possessors of dogs or cats having similar bald-spots. In the belief of the parasitic origin of alopecia, our author has treated more than a thousand cases by means of an antiparasitic plan of treatment, and with marked success. His method is the following: For six to eight weeks the hair is washed with a soap rich in tar (Berger's), the suds being rubbed well in for ten minutes each day. Then the suds are washed out with warm, followed by cold water, the scalp and hair dried, and the former anointed with ℞ Sol. hydrarg. bichlor. (one third of one-per-cent. strength), glycerin, and cologne water, equal parts; then rubbed dry with absolute alcohol containing one half per cent. of naphthol, and then anointed with ℞ Salicylic acid, ʒ ss.; tincture of benzoin, gr. xiv; neat's-foot oil, ʒ iij. M. After six to eight weeks the process is to be less often repeated. In obstinate cases the sublimate solution should be used many times a day. Or this salve may be used: ℞ Carbolic acid, 15 grains; sublimed sulphur, 65 grains; horse-neck fat, to ʒ ij. M. Another good stimulant is oil of turpentine, either with equal parts of an indifferent oil or with dilute alcohol. Another is pilocarpine hydrochloride, 30 grains; vaseline, 5 drachms; lanolin, 2 ounces; oil of lavender, 25 drops. M. Ear is good; and as a final formula we have: ℞ Pilocarpin. hydrochlor., 30 grains; quinin. hydrochlor., 1 drachm; sulph. præcipitat., 2½ drachms; balsam. peruv., 5 drachms; medul. bovin., ad ʒiij. M.

Lying-in-Toilet. — On entering the lying-in chamber with clean hands and a clear head, whether it be in hovel or palace, determine by the usual methods that labor has begun or is about to begin, ask the patient to leave the bed for a few minutes, while you prepare it. The information frequently offered by some attendant, that "I have made her bed," means that it is so prepared that when labor is ended everything within reach is soiled.

You should undress the bed to the mattress. Fold a sheet crosswise, with folded edges lying at the head of the bed. Over this spread a rubber blanket or oilcloth; over this a sheet. Now fold a sheet as a mother does a diaper, and lay it across the bed, to be used in dressing the patient for her labor. Now direct the nurse to put the patient to bed, and before retiring that her garments should be neatly folded about the chest and back, baring her to the waist.

The abdomen, thighs and genitalia are now protected by the large diaper. The usual covering to suit the patient's comfort completes the preparations.

The third stage of labor terminated, the placenta is carefully examined, placed in a heavy newspaper and quietly cremated. With a receptacle at hand, the folded sheet is now removed, and with its removal comes ninety per cent of the detritus. An assistant on the opposite side of the bed now gathers, as do you, the rubber blanket and overlying sheet, and carefully draws them towards the feet. As the buttocks are reached, stop and give the woman a very careful but thorough antiseptic bath. Dry the parts, and apply on a napkin your favorite antiseptic. Remove the sheet and rubber blanket, placing necessary protection over the mattress. Upon this, whatever it be, sprinkle antiseptic fluid.

Draw the upper half of the sheet first laid upon the bed to the feet. Apply a bandage, if you use one. Draw the clothes down, and the new mother is ready to rest.

Advantages offered. First. All ladies appreciate any effort upon the part of the physician to lessen the disagreeable features of parturition.

Second. A cremated placenta is inoffensive.

Third. An antiseptic bath given by the one upon whom the responsibility of the case rests is more likely to be carefully given than by another person.

Fourth. Anyone who has attempted it knows how difficult and unpleasant is the operation of dressing and undressing the new mother. How slight in comparison, the mere drawing toward the feet of the chemise and gown!—*Dr. Dunham in Med. Era.*

Accumulation of Potassium Bromide in the Brain.—The very large use of potassium bromide

as a drug given continuously for many years, has suggested an inquiry into the extent and the methods of its accumulation in the human body. It is well known that its elimination is slow. If a dose of 20 grains is given to a dog, the greater part has left the body in thirty-six hours, but there are traces left for a month, and it is a special point of interest to notice where those traces are to be found in the body, and also, if possible, in what organs the accumulation takes place. M. Doyon contributes a noteworthy case. A boy æt. 12, was under hospital treatment for a year for a series of epileptic attacks complicated with acute mania. He was taking during the whole of this time from 60 to 120 grains a day of potassium bromide. In November, 1888, he caught scarlet fever. The fever was not severe, and ran a normal course, but the attacks of epilepsy and mania continued to occur, and in the intervals between those there was profound depression and disinclination to speak or eat. At first the potassium bromide was given up as unsuitable, and indeed perhaps dangerous; but when the convulsions recurred again and again, it was resumed in doses of 60 grains a day. After some days a cough began, which was sometimes very choking; there was no auscultatory sign of pneumonia, but the temperature rose, and he died eighteen days after the onset of scarlet fever. A post-mortem examination showed some patchy congestion of the lungs, with a little pus in the bronchi, and no pathological change in the kidneys or elsewhere, except perhaps that the brain substance was a little tougher than usual. The torpor between the convulsive attacks had been very striking clinically, and his doctors were interested in attempting to trace a connection with the bromide treatment and a possible accumulation of the drug. M. Cazeneuve analyzed the brain, and M. Doyon the liver, for comparison. In the brain there was found 30 grains of bromide; in the liver 12 grains. The relative weights of the brain and liver are 15 to 8; and making allowance for this, our conclusion would be that if the percentage in the brain and liver had been the same, when the liver contained 12 grains there would have been 22½ grains in the brain. In this case, however, the brain had 30 grains, and the conclusion M. Doyon wishes to draw is, that though the bromide accumulates both in the liver and brain, the accumulation in the brain is the greater.—*The Practitioner.*

THE TREATMENT OF GONORRHŒA.—In the *Med. Record* for July 20, 1889, Dr. E. P. Rice summarizes as follows his method of treating gonorrhœa. The patient should be placed in the recumbent position, and after lubricating an ordinary soft rubber catheter with five per cent. carbolized oil, introduce it as far as the prostatic portion of the urethra. In acute cases it may be necessary to inject a little five per cent. solution of muriate of cocaine, if pain is produced. Now insert into the free end of the catheter an ordinary glass syringe, having a nozzle with an opening sufficiently large to allow the liquid to pass through easily, which will be about the consistence of an ordinary emulsion, and should be made as follows:

℞—Acid. boric., ʒiij;
Glycerini, ℥j.

Mix and rub well together, and shake well before using.

Pour about two drachms of this mixture into the syringe, having previously withdrawn the plunger. Now, gently insert the plunger, and force the liquid into the catheter, which is held in place with the thumb and forefinger of the left hand; the forefinger of the right hand should be used to force in the plunger. After all the liquid has passed out, gently withdraw the catheter, stripping it at the same time in order to force all the liquid into the urethra. Let the patient remain in the recumbent position for ten minutes longer, the whole operation lasting generally about fifteen or twenty minutes. This treatment should be repeated every day, for the first two or three days, and then on each alternate day. As a rule, in acute attacks, five or six treatments will suffice. In long-standing cases the same treatment should be used, alternating with some mild astringent injection used in the same way. The sound should be used in subacute and chronic cases, at intervals of about three days. It is also advisable to give internally, in all cases, a saline laxative, and in the old cases I generally give, in addition, capsules of bal. copaibii, ♏vi; ol cubebæ, ♏iv, t. i. d., either before or after meals.

The fact of antisepsis should never be lost sight of, as so many are apt to do. It is a well-known fact that boric or boracic acid is a mild and unirritating antiseptic, which, when combined with glycerin as a vehicle, also an antiseptic, renders a very safe agent to use for this purpose.

One important point is also gained in this plan We always have the patient practically under control, and can watch the progress made, not being dependent upon the say-so of the patient.—*Therap. Gaz.*

TREATMENT OF DIABETES BY ANTIPYRINE.—Dr. Joseph S. Carreau, of New York (*Med. Record*), cites three cases of this disease successfully combated by this remedy. He also states the fact that Dujardin-Beaumetz, at a meeting of the Académie de Médicine, March, 1888, praised the happy effects of antipyrine in certain cases of diabetes, especially when the two symptoms, polyuria and nervous irritation predominated. Henri Huchard, at the Société de Thérapeutique, February, 1888, said that he employed antipyrine

in a case of symptomatic polyuria resulting from meningo-myelitis, with good effects. He gave from four to six grammes daily, and the quantity of urine was brought down from thirty-six litres to four. He also reported a case of diabetes, where he noticed, in a few days, the sugar diminish from 735 to 271 grammes a day under the use of antipyrine—two to six grammes daily. He also said that the prolonged administration of antipyrine, in his own experience, has never been followed by albuminuria.

M. Panas reported two cases to the Académie de Médicine, April, 1889, where great relief followed the administration of antipyrine. A man aged thirty-eight, passing forty-nine grammes of sugar in twenty-four hours, by taking two or three grammes daily during six days, had all traces of sugar in his urine removed. A woman, aged seventy-three, by taking three grammes daily, for a few days, also received similar benefit.—*Coll. and Clin. Rec.*

Treatment of Tuberculosis in Children.—According to Dr. Jacobi, arsenic is a remedy of much usefulness in the treatment of tuberculosis in children, but it is necessary only to administer the drug in small doses. A young patient, for example, could take every day, and that for weeks or months, two drops of Fowler's solution. This dose should be diluted in a sufficient quantity of water, and given three times a day after meals. If any signs of saturation supervene, the dose should be withheld for a time. A second remedy, of almost equal value in these cases, is digitalis. Under the influence of this drug the contractility of the heart muscle is strengthened, and, consecutively, the arterial pressure is increased, and the rapidity of the pulse diminished. The general effect of the increased arterial pressure is to favor the nutrition of the tissues. The choice of the particular preparation of the drug is a point of some moment. Oftentimes the infusion and the tincture are badly borne by the stomach; digitaline, on the other hand, is an inconstant preparation; thus the fluid extract is most to be recommended, either in pills or in capsules, and this can be dispensed with other drugs, such as narcotics or iron.—*Med. Press and Circular.*

The Antiseptic Action of Ammonia.—One of the facts now becoming abundantly substantiated with regard to the effect of organisms on the organic bodies on which they live (albuminoids, etc.) is, that the products of bacteria lactivity tend to limit and finally to destroy the vitality of the growing organisms Not only is this so with bacteria, but it is now well known, and can be readily demonstrated by experiment, that the products formed by digestive ferments from albuminoids or carbohydrates tend to "choke" ferment activity, which indeed revives when the products are removed, as, for example, by dialysis. Ammonia is one of the commonest products of putrefaction. It is formed not only by the action of putrefactive bacteria on albuminoids, but is a result of the decomposition of urea, which occurs from the action of the bacillus ureæ. Gottbrecht has lately tested the anti-fermentative action of ammonia. In his experiments he did not use the gas itself, but carbonate of ammonium, which, although less volatile than the gas, readily develops ammonia. It was found that a two per cent. solution of this salt delayed the decomposition of portions of fresh organs for nine days, a five per cent. solution for nineteen days, while a ten per cent. solution delayed it for sixteen days. In mixtures in which decomposition had already occurred, ammonium carbonate added to the amount of five per cent. after a time killed the organisms; while a two and one-half per cent. admixture of the salt diminished their activity. On the other hand, it was found that smaller proportions of ammonium carbonate, one-fourth to one per cent. not only did not diminish, but actually increased the activity of the organisms, so that putrefaction became more rapid. This is only another example of a very large class of substances, which in small doses increase activity, in large doses diminish it; many of the drugs which act on the heart have this action. It might be considered that the action of carbonate of ammonium on putrefactive changes was due to the state of alkalinity produced in the liquid; but that this is not so, is shown by the fact that sodium carbonate added to the same degree of alkalinity does not possess any anti-putrefactive action.—*Br. Med. Jour.*

Paraldehyde as a Hypnotic.—Mr. Morgan Finucane, Assistant Medical Officer, Hants County Asylum, believes that in paraldehyde we have a perfectly safe, and if given in large enough doses, a very effective hypnotic. The usually known dose is practically useless, anything less that one drachm and a half producing little or no effect. The immediately observed effects are quiet and refreshing sleep, the average being seven to eight hours; on waking the patients do not feel the effects produced by certain other drugs, *e.g.*, headache, drowsiness and dryness of the mouth. The heart and pulse are increased in frequency and force, the general effect being that of a diffusible stimulant. In all forms of maniacal excitement with extreme restlessness, and in cases of restlessness with dementia; whether paralytic or otherwise, paraldehyde is of the greatest use. The value of the drug is especially seen in cases such as general paralysis, where hyoscyamine is obviously wrong, and opium is often contra-indicated owing to the presence of renal disease.—*The Lancet.*

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PROPLYLAXIS OF TUBERCULOSIS.

The germ theory of disease has certainly revolutionized modern surgery, and is going far in the direction of revolutionizing practical medicine and obstetrics. The discovery of the bacillus of tuberculosis by Koch in 1881, was perhaps one of the most momentous events connected with the advance of the science of medicine, that has ever taken place. True, we can hardly imagine that, even without Koch's genius and painstaking labor, the discovery could have been delayed till the present time; still to him is due the glory of having made tangible the etiology of one of the greatest scourges, not only of humanity, but also of many species of the lower animals. The belief in Koch's bacillus being the definite cause of tuberculosis, whatever form that protean disease may assume, may be said to be practically universal among the educated minds of the profession. Indeed consumption is said to be "infectious," in the same sense that scarlet fever or smallpox is infectious. This fact, which is not only believed, but we think abundantly proved, opens out a whole new world for the physician. It has taken some ime—since 1881—for the medical mind to be- me educated up to this point, namely, the firm nd unshaken belief in the transmissibility of tuber- ulosis from an infected individual to a healthy ne, or from the lower animals to man.

We have in a former number pointed out the ct that certain individuals are especially liable to come a prey to the ravage of this parasite, thus meeting the old and apparently valid objection to the bacillary theory, namely the influence of heredity in the transmission of the disease. Such a land-mark, as a family tendency to consumption, could not be overlooked by practical men, and no doubt did much to retard the true scientific appreciation of the real nature of tuberculosis. For, said the opponents of the germ theory, if the disease be from *without*, how can the fact of whole families dying off at about the same age, from this fell disease, be accounted for? Has the germ of consumption an especial predilection for the Smiths, while it eschews the Robinsons?

So far as we know, Lauder Brunton was the first to answer these objections, which he did very effectually by showing that not the disease itself is inherited, but a peculiar quality of tissue which renders the individual susceptible to the influence of the poison. Every practising physician must have breathed in myriads of tubercle bacilli, as have also nurses and attendants in hospitals, friends of phthisical patients, and indeed all others coming in contact with such patients, yet not a tithe of the persons thus exposed have become infected, simply because their respiratory tracts were in a healthy state and thus able to get rid of the intruding germ before it had time to grow, and form a focus of inflammation, from which the disease might be disseminated to other parts of the same system. For the bacillus tuberculosis is of *slow growth*, about ten days being necessary to elapse before it can, even in a suitable position, "establish itself and begin to grow." This one fact explains how so many persons having healthy lungs, escape, though often exposed to the disease, while others having a poor quality of epithelium in the respiratory tract, with imperfect function, offer a tempting resting-place for the bacillus, and leave it in peace long enough for it to begin its deadly work. It is not only in this disease that such bad quality of epithelium is noticeable.

Many skin diseases offer a parallel too obvious to need further notice here, as also catarrhs, ophthalmias, etc. It is from a consideration of such facts as have been hinted at rather than discussed above, that the practical side of the question has of late occupied so much the attention of sanitarians the world over. If consumption be an infectious disease it may surely be, if not eradicated, at

least greatly lessened by proper measures for the disinfection of those suffering from it, as also by their isolation, as far as is practicable from a humanitarian stand-point. It is gratifying to notice that more or less stringent measures are being adopted in many of the great centres of population, as Paris, New York, Glasgow and Berlin, for the limitation of possible infection. These measures are very various, but in all cases the principle of transmission is fully recognized. Many corporations are insisting upon a periodical inspection of all dairy-men's cows, with a view to reduce to a minimum the risk of infection through the milk of tuberculous cows, a product which has been shown to be full of danger to those using it. The Paris Congress of 1888, to which we called attention at the time, spoke very strongly, as to the absolute necessity of the most strict measures being adopted to stay the spread of this disease. Thus, the following resolutions, taken from the Transactions, will be of interest:

"It is imperative that every possible means should be adopted, comprising compensation to parties interested, for the general application of the principle of seizure and general destruction in totality of all flesh belonging to tuberculous animals, no matter how slight the specific lesions found in such animals."

"The Congress expresses the wish that tuberculosis be included in the sanitary laws of all countries in the world amongst contagious diseases requiring special prophylactic measures."

Practically, what can each of us do in the way of prophylaxis? The most humble of us can, to a certain degree, educate our *clientèle* as to the dangers of infection, whether from personal contact or from the lower animals. Thus, arrangements as to sleeping in the same room or bed with persons suffering from the disease, might be, and we have no doubt would be, greatly modified if the doctor in charge insisted upon it, or even, indeed, if the family recognized the necessity for isolation to a certain degree. Reception and disinfection of the sputa of tuberculous persons, in properly constructed vessels, would surely minimize the risks run by other members of the family living in the same house, or in the same room often. By attention to such apparently small and easily-managed prophylactic measures, we believe much could be done, which is not now being done, to lessen the ravages of this dread disease.

TYPHOID FEVER.

Dr. Simon Baruch, of New York, in commenting upon the article which appeared in *Gaillard's Medical Journal* for April, 1889, with reference to Zeimssen's treatment of typhoid fever, draws attention to the fact that the object of Zeimssen's treatment by the graduated bath, is not so much the lowering of the temperature as the refreshing excitation of the central nervous system. The stimulus which the nerves of sensation receive from the low temperature of the bath is centripetally propagated, and affects in a greater or less degree all vitally important nerve centres. The depressed excitability of the brain is relieved, and from the refreshed centres emanates a refreshed innervation of the circulation, respiration, digestion, tissue change, and locomotive apparatus. The effect is a free sensorium, a bright eye, active movement and surprising desire for food. When the true office of the cold bath is fully grasped, it will lead to the abandonment of all drugs, and other measures which simply reduce the temperature, without counteracting the toxic effects of the typhoid process, which is the true lethal element rather than the high temperature. Dr. Baruch lays down the following aphorisms:

1. Every case of typhoid fever, pronounced or suspicious, should be subjected to the bath when the rectal temperature reaches above 103° F.

2. The temperature should be taken and the bath continued every three hours, unless the patient is sleeping naturally.

3. If patient or friends are timid, begin with cold ablutions hourly, with clothes partly wrung out of water at 65° F.

The next step is to immerse the patient every three hours, in a bath at 90° F. and gradually reduce the temperature by removing the warm and adding cold water, to 68° F.; duration of bath half an hour, unless chattering of the teeth occurs. The patient and friends being now somewhat re-assured, the cold half bath with friction, temperature 65° F., with occasional affusions, may be given every three hours; the last step in this gradual education being the full bath at 65° to 75° F. for fifteen minutes every three hours as indicated.

4. In cases of adynamia or muttering delirium with a temperature below 103,°a half bath at 10

with gentle cool affusions (65°) over head and shoulders, will arouse the nerve centres and often change the entire aspect of the case.

5. Chafing the surface during the bath opens the superficial vessels and prevents rapid chilling. The collapse-like manifestation, sometimes resulting from the latter, are more apparent than real.

6. The tub must stand next to the patient's bed; the water need be renewed only once in 24 hours, unless soiled by the patient.

7. Systematic bathing has reduced the mortality of typhoid fever from 25 to 17 per cent., as I have demonstrated by statistics of 30,000 cases, the largest number ever recorded for the elucidation of a question of comparative therapeutics.

DILATING URETHROTOMY IN TREATMENT OF URETHRAL STRICTURE.

Dr. Fessenden N. Otis presented in a short paper to the Association of Genito-Urinary Surgeons at Washington, D.C., September, 1888, a résumé of his experience of seventeen years in the operation of dilating urethrotomy, lately published in the New York *Medical Record*. We have read this paper with much interest, and are pleased to find that the method of treatment for urethral stricture advocated by the author in 1871 has been unusually successful, since he reports the condition of many cases operated upon by his method and by himself, cured—that is, there has been no return of the constriction years after the final treatment. Bearing in mind Sir Henry Thompson's statement that he doubts ever to have known stricture of the urethra permanently cured by any treatment, the publication of Dr. Otis' success is extremely important, more especially since all these cases have been subjected to the most severe test—exploration by the bulbous bougie. From experience in the treatment of stricture elsewhere, as well from a knowledge of simple pathological laws, we cannot clearly understand how an organized band of cicatricial tissue in the urethral wall, can be removed, either by incision, dilatation, or rupture; but that such can be done, as the result shows is undoubted. It is our duty then not to denounce a method which experience justifies, because in our philosophy it appears irrational.

Most surgeons agree with the learned specialist that careful cutting of a stricture, moderately stretched on a dilator, is more satisfactory and less severe than violent rupture by powerful instruments. For obvious reasons the incision should correspond with the exact upper urethral plain, for at that spot there is less danger of hæmorrhage or urinary infiltration; and internal urethrotomy should not be practiced posterior to the bulb. These are precautions familiar to all surgeons. But there is, and always has been, general reluctance to extensive cutting of the meatus, as practiced Professor Otis and his school. It would seem that by thus lessening the inter-urethral tone of the passing urine the physiological harmony between the propelling force of the bladder and the normal resistance of the urethral wall is destroyed, which may in the end, cause disease. But as this fear is not supported by fact, it is presumptive that the meatus urinarius has but little to do in the act of micturition.

In 1675 Dr. Otis published his first observations, based upon a series of thirty-six re-examinations with bulbous sounds of the full size of the normal urethra, at periods ranging from six months to three years after operation, during which interval no use of sounds had been resorted to. In thirty-one of these cases, or about 80 per cent. *complete freedom from the former strictured condition* was demonstrated by the unobstructed passage to and fro throughout the entire urethra anterior to the bulbo-membranous junction, of a metallic bulbous sound of the full normal size of the urethra, as determined at the time of operation. In a second series, consisting of 136 tabulated cases, presented in 1878, eighty-two re-examinations were reported, out of which sixty-seven were found entirely free from stricture. In three of these cases six years and six months had intervened between the date of operation and the re-examination; in two cases, over five years; in three cases, over four years; in ten cases, over three years; in seven cases, over two years; in twenty cases, over one year; in ten cases, six months. This is a remarkably good showing and deserves the attention of every surgeon.

OUR MEAT AND DRINK.

So it has come to this, that men
Must dine no more on flesh again,
The chances being nine to ten—
Tuberculosis.
The thought's enough to there and then
Cause cyanosis.

I wonder what is safe to eat!
Swine seem as bad as butcher's meat,
For porcine flesh they say's the seat
Of trichinosis,
And even tea, that household treat,
Brings on neurosis.

They are all tabooed—well, let them go!
What though it brings my system low,
And fond friends cry in tones of woe,
"He's got chlorosis!"
Impoverished blood is less a foe
Than scrofulosis.

Farewell, my modest evening tea!
Microbic flesh depart from me!
Seductive beer it may not be!
Who wants cirrhosis?
E'en sugar's not suspicion free,
There's teeth necrosis.

No more the cherished hope I'll hug
That all this cry is mere humbug;
Henceforth I'll feed on "flesh that's dug."
If plants have "oses,"
I'll swill some antiseptic drug
In treble doses.

—E. P. W., Glasgow, in *Hosp. Gazette.*

RETROFLEXION.—As a simple means of replacement in some cases of retroflexion and retroversion (*Obs. Gaz.*), the tenaculum is especially useful. Here, sometimes, it is absolutely necessary, in order to replace the uterus satisfactorily, to exert pressure and traction in three directions at one time. The great obstacle in the way of an easy and immediate reposition, in cases of retroflexion where the cervix has not also descended towards the vaginal outlet, is the fact that upward pressure upon the fundus through the vagina or rectum only tends to drive the body of the uterus into the body of the sacrum. By catching the tenaculum in the cervix and drawing it down, the uterine body is straightened out; then holding the tenaculum in the left hand, and exerting pressure upon the fundus with the index finger of the same hand introduced into the rectum, the body yields and begins to go upwards into the pelvis, describing an arc around the fixed cervix, sweeping clear of the sacral promontory; at this point the fundus is caught by the other free hand working through the abdominal walls, and drawn forward. The left hand now lets go the tenaculum, and the index finger is withdrawn from the rectum, and is used (after washing) to push the cervix high up and far back in the pelvis, while the body is brought further forward and forced down. In this way the reposition is satisfactorily and easily accomplished.

AMERICAN PUBLIC HEALTH ASSOCIATION — HEALTH EXHIBITION. — The American Public Health Association will hold its next Annual Meeting at Brooklyn, N. Y., October 22, 23, 24 and 25, 1889. This Association comprises over eight hundred members, all devoted, officially or otherwise, to its declared purpose—the advancement of sanitary science and the promotion of organizations and measures for the practical application of public hygiene. In the furtherance of this purpose it has met annually, during the last sixteen years, in different cities of the United States and Canada, and has in every instance had the effect of greatly stimulating public effort in the promotion of health and measures for its maintenance. With the hope of still further magnifying this interest and effort, it is the purpose of the Association, through its local committee, at the forthcoming meeting, to provide an *Exhibition of everything available adapted to the promotion of health.* The following topics have been selected for consideration at the meeting:—1. The causes and prevention of infant mortality. 2. Railway sanitation. (*a*) Heating and ventilation of railway passenger coaches. (*b*) Water supply, water closets, etc. (*c*) Carrying passengers infected with communicable diseases. 3. Steamship sanitation. 4. Methods of scientific cooking. 5. Yellow fever. (*a*) The unprotected avenues through which yellow fever is liable to be brought into the United States. (*b*) The sanitary requirements necessary to render a town or city proof against an epidemic of yellow fever. (*c*) The course to be taken by local health authorities upon the outbreak of yellow fever. 6. The prevention and restriction of tuberculosis in man. 7. Methods of prevention of diphtheria, with results of such methods. 8. How far should health authorities be permitted to apply known preventive measures for the control of diphtheria. 9. Compulsory vaccination. 10. Sanitation of asylums, prisons, jails, and other eleemosynary institutions.

THE PREVENTION OF MAMMARY ABSCESS.—Miall says (*Med News*), when mammary abscess is on

the point of forming, he has frequently seen all the symptoms disappear in a few hours under the influence of fomentations with hot water and carbonate of ammonia. He uses an ounce of the carbonate in a pint of water, and, when solution is accomplished, the temperature of the fluid will be hardly too high for fomentation to be commenced with cloths dipped in the liquid. He applied them from half an hour to two hours, at the same time protecting the nipples. He has often had immediate relief, and seldom requires more than three applications.

FLATULENT DYSPEPSIA.—Dr. Eloy, *Therap. Gaz.*, suggests the following:

℞.—Creasot. pur. . . . . gtt. x.
Sodii. bicarb. . . . . ʒij.
Acaciae. pulv. . . . . q. s.
Aquæ. . . . . f. ʒv.—M.

SIG.—A coffeespoonful one hour after each meal. If the dyspepsia be dependent upon gastric atony and insufficient gastric secretions, the following is suggested:—

℞.—Pepsin . . . . . ʒj.
Creasot. . . . . gtt. x.
Bismuth Subcarb. . . . . ʒj.—M.

Divide into chartas xxx, of which one may be given in a gelatine capsule.

THREATENED ABORTION.—M. D. Makuna, M. R.C.S. Eng., Lic. Med. University, Bombay, 1876, Trebeebut, Rhondda Valley, South Wales, says: I have much pleasure in expressing my satisfaction with the results I have obtained by the use of Aletris Cordial. One of my patients who had miscarried three times previously took Aletris Cordial during the last three months of pregnancy and was delivered of a fine healthy boy. I ordered it at her own solicitation, as she expressed so much ease and comfort after the use of the first bottle. I am now giving it to two more patients who have miscarried several times before and I am in hopes of good results. I consider it a valuable addition to the Pharmacopœia, on account of its antispasmodic and nerve-tonic properties, and I should not like to go without it.

THERE is no other exhibit of the class in the United States section to rival that of Wm. R. Warner & Co. From the globe-advertising Philadelphia merchant comes an exhibit which the native pharmaciens can look at with both admiration and wonderment. The display is enough to make any Frenchman curious, and their arrangement such as to be above deprecatory criticsm; and than Frenchmen there could not be a people with better taste for the proper and harmonious exhibition of products. A glance through their own magnificent section of pharmacy will verify this. Readers would find superfluous a description in detail of the Messrs. Warner's essentially fine installation covering all their soluble sugar-coated pills, salts, etc. Suffice it is to remark that at the Paris Universelle their exhibit is thoroughly representative, comprises all the makers' fabrications, and is decidedly an honor to the concern.—*Pharmaceutical Record.*

TINCTURA CASTOREI SPIR. FOR MORPHIA HABIT.—A peasant woman (says the *Va. Med. Monthly*) who, during a case of exudative peritonitis, became addicted to morphine, taking daily sixteen grains, was denied the drug. Cramer sent her tinctura castorei spir., with the assurance that it would answer as well as morphine. What was his surprise to hear from the patient that it filled all the indications, and she was soon relieved of the fearful morphine habit. This suggestion is worthy of further trial.

OL. TEREBINTH IN CROUP.—Dr. Lewentaner recommends the following in croup, having had much success in its treatment:

℞—Rectified oil of turpentine, . 1 fl. ʒ,
Oil of sweet almond, . . . 2½ "
Simple syrup, ... 3 "
Mucilage of acacia, . . . 10 "
Yelk of one egg.
Canella water, enough to make 3 fl. ʒ.—M.

Sig.—A teaspoonful every hour for a child ten years old.

FOR FUNCTIONAL JAUNDICE.—Dr. Samuel, writing to the *N. Y. Med. Jour.*, speaks highly of the following in functional jaundice:

℞—Sodii phosphatis, ... ʒ ij.
Aquæ pur., ... f ʒ j.
Misce, et ft. solut. et adde:
Tinct. nucis vomicæ, ... f ʒ ij.
Tinct. gentian, ... ad f ʒ iv.—M.
Sig.—Teaspoonful three times a day.

New York Polyclinic.—The annual announcement of the New York Polyclinic, a Clinical School for graduates in medicine and surgery, shows an attendance for the session of 1888-9 of 383 physicians, making since the opening of the pioneer post-graduate school in 1882, a total of 1,883. These figures demonstrate beyond all doubt the popularity of the Polyclinic system of instruction. The most important feature of this year's catalogue is the *Polyclinic Hospital.* By the enlargement of their property the Faculty have established an extensive hospital, which will afford at all times ample material for all clinical purposes. The Polyclinic and hospital buildings have been completely fitted out with all the modern appliances conducive to the healthfulness and comfort of the patients and physicians in attendance. The session of 1889-90 opened Monday, Sept. 16.

For Chapped Nipples.—Says the St. Louis *Med. and Surg. Jour.*:—Mitropolsky, of Moscow, recommends chloral as an excellent local means for fissured and excoriated nipples. The latter should be kept covered with compresses (soft linen) soaked in a solution of half a drachm of chloral in three ounces of water. The compresses should be changed every two and a half or three hours. When a prolonged application is necessary, it is advisable to use a weaker lotion (half drachm to six ounces). The solution leaves a thin, whitish, firmly adherent film over the diseased surface, which does not disappear by suckling. Pain and tenderness are said to be strikingly relieved almost immediately, the lesions rapidly healing. The chloral compresses do not produce any bad effects on nurslings.

Fistula in Ano.—Several journals, says the *Pacific Med. Jour.*, have of late been discussing the origin and treatment of fistula of the anus. The old observers long ago asserted that anal fistula and consumption were frequently concomitant diseases, so much so that they were believed to possess some intimate bond of connection. It was further thought to have been proven that when the troubles existed together in the same individual, to cure the fistula was to encourage the disease in the lung. To Professor Volkmann is due the honor of first demonstrating the tubercular nature of fistula, and to-day, in most such cases, the presence of the tubercle-bacilli can be shown by the microscope. With our present knowledge as to the etiology of tubercular disease the treatment of fistula is no longer a matter of question. The removal of the local tuberculosis by surgical procedure as quickly and as radically as possible is clearly indicated.

Chronic Cystitis.—Dr. Moestig-Moorh, of Vienna, says the *Wiener Med. Presse*, has had much success in the treatment of chronic cystitis with iodoform injections. The bladder having been irrigated with moderately hot water, an injection of the following emulsion should be made:

℞—Iodoform, ...	50 parts.
Glycerin, ...	40 parts.
Aquæ dest., ...	10 parts.
Tragacanth gum, ...	¼ part. M.

Sig.—One teaspoonful to a pint of lukewarm water, well stirred, for one injection. Injections should be made every third day.

Another Bacillus—Dr. Achille Manlinconico, in a pamphlet mentioned in the *Deutsche Med. Zeit.*, concludes that decay and death are due to the baneful action of a specific micro-organism. It is to be hoped the Dr. may soon succeed in "spotting" this germ, and then the dream of perpetual youth may be realized; for, with the list of germicides now at our disposal, no difficulty should exist in bringing down the game, once it is sighted. It will be a fine line that the Dr. will have to draw as to just when to begin slaughtering the new game, as no arbitrary rule as to years can be laid down, stating when the individual has reached the zenith of his development and decay is about to set in.

Cyanide of Mercury in Diphtheria.—Dr. A. Selldén, *Lancet*, a Swedish provincial medical officer strongly recommends the use of cyanide of mercury in diphtheria; he looks upon this drug almost as a specific. He recommends the following formula:

℞.—Cynide of mercury . . .	gr. ⅓.
Tr. of Aconite	♏ xv.
Honey	℥xiij.—M.

Sig.—℥j every fifteen, thirty, or sixty minutes, according to the patient's age. A gargle is prescribed to be used every fifteen minutes, composed of cyanide of mercury in peppermint water, in the proportion of 1 to 10,000.

TREATMENT OF THE OPIUM HABIT. — (1) No confirmed case of the opium habit can be satisfactorily treated at home. (2) Hypodermic injections of morphine, administered by the physician, constitute the best means of administering the drug during its gradual withdrawal. (3) The substitution of other narcotics does not constitute any special part of the treatment. (4) The systematic administration of suitable food at short intervals, and the judicious use of alcoholic stimulants, will prevent many of the serious symptoms following the withdrawal of the drug. (5) The insomnia and asthenia of convalescence are incidental to the readjustment of the nervous system to normal conditions. So long as these symptoms persist there is danger of a relapse.—*Med. and Surg. Rep.*

MENTHOL IN PRURITIC AFFECTIONS.—Menthol is highly recommended by Saalfeld, Berlin, in cases of pruretics of various kinds. He prescribes it either as a wash or as a salve, the formula being :—

1.	Menthol	22–37 gr.
	Spirit vin rect.	ʒj ℥ss.
2.	Menthol	37 gr.
	Ol. Olivarum	(ʒij – 3iij.)
	Lanolin	ʒj ℥ss.

Both preparations have done him excellent service in urticara, pruritus cutaneus, and pruritus senilis.

ANTIPYRINE IN LABOR.—Dr. Ermanno Rinzani, says the *Bv. Med. Jour.*, after experementing with antipyrine in labor, came to the conclusion that it relieves the pains of labor simply by lessening the force of the uterine contractions. He noticed that infants suckled by women who had taken antipyrine during labor, were apt to suffer from diarrhœa. His verdict is, therefore, against the use of antipyrine in midwifery practice.

DYSPEPSIA.—The following (says Dr. I. N. Love, in *Med. Rev.*) is good for fermentative dyspepsia :—

—Acid carbolic	gr. vj.	
Tr. nucis vom.	f ʒ ss.	
Acid nitro. mur. dil. . .	f ℥ ss.	
Elix. lacto. pep.	f ℥ iij.	
Spts. frumenti.	f ℥ ij.	M.

—ʒ j. tid. ante. cib.

TO STERILIZE MILK.—It is not necessary (*Dietetic Gaz.*) to invest in a sterilizing apparatus, as any housekeeper can arrange one equally efficient for herself. All that is necessary is to have some bottles, capable of containing the milk to be used in a day; each large enough to contain what will be needed at one time. These bottles and their corks should be thoroughly cleansed by boiling in a solution of washing-soda. The corks should be selected, and of the best variety. When the milk is brought to the house it should be placed in these bottles, which should be arranged on a wire frame in a pot of water, and boiled for fifteen minutes. They should then be corked securely and placed in the refrigerator with the ice *upon* them, not under them. In the country they may be lowered into the well. Milk thus treated will not only keep sweet and fresh, but almost any impurity it may originally contain will be rendered innocuous. The flavor of boiled milk is unpleasant to many persons; but this may be remedied by the addition of a little coffee or cocoa. At any rate one must not expect too much in this world; and for the sake of safety put up with the unpleasant taste, or learn to like it.

NEURALGIA.—A writer in the *Courier Méd.* gives the following as useful in neuralgia :

℞—Alcohol, camphorat., . .	90 parts.	
Ætheris, ...	30 "	
Tinct. opii, ...	6 "	
Chloroform, ...	20 "	—M.

Sig.—Apply on flannel.

PRESERVE YOUR INSTRUMENTS.—You can preserve your instruments from rusting by immersing them in a solution of carbonate of potash for a few minutes. They will not rust for years, even when exposed to a damp atmosphere.

GALL-STONES.—In the case of a woman who had passed gall-stones, Prof. Bartholow (*Med. World*) directed $\frac{1}{10}$ gr. arseniate of sodium ter die, and :

℞—Sodii phosphate, ...		
Sodii sulph., ...	āā ʒ ss.	

Sig.—Ter. die in water.

HICCOUGH.—Dr. Brinkerhoff writes to the *N Y. Med. Jour.*, that calamus is an excellent remedy for hiccough. He has used it in some cases of an aggravated nature, and always successfully. Only a small quantity is needed.

Acute Coryza is said to be cured by the inhalation of camphor fumes, the camphor being powdered and placed in a vessel containing boiling water. Ten or fifteen minutes suffice for the cure of acute cases if taken early.

It is stated (J. Mosse, *Lyon Med.*) that ten minims of tincture of iodine, taken in half a glass of water twice a day, will cause the disappearance of warts. The Dr. has tested the drug in ten cases, with success in all

Books and Pamphlets.

An Introduction to Pathology and Morbid Anatomy, by T. Henry Green, M.D., Physician to Charing Cross Hospital, and to the Hospital for Consumption and Diseases of the Chest, Brompton; Examiner in Medicine to the conjoint Examining Board for England; late Lecturer on Pathology and Morbid Anatomy at Charing Cross Hospital Medical School. Sixth American from the Seventh English Edition; revised and enlarged by Stanley Boyd, M.B., B. S. Lond., F.R.C.S. Eng., Senior Assistant-Surgeon to Charing Cross Hospital, and Surgeon to the Paddington Green Hospital for Children; Lecturer on Anatomy in the Charing Cross Hospital Medical School, and formerly Pathologist to the Hospital. Illustrated by 167 fine engravings. Philadelphia: Lea Brothers & Co. Toronto: Carveth & Co. 1889.

This justly popular work comes before us in a considerably improved condition. Unfortunately Dr. Green has had nothing to do with the present edition, but his place has been well supplied by Dr. Boyd. Several chapters have been re-written, and the whole is brought up to the standard of to-day's knowledge of pathological processes. Several new wood-cuts have been added, and altogether the work is one which, in our opinion, is just what the student requires.

Wood's Medical and Surgical Monographs—Consisting of original treatises and complete reproductions in English, of books and Monographs selected from the latest literature of foreign countries, with illustrations, etc. Published monthly at $10 per year. Single copies, $1. New York: William Wood & Co., 56 & 58 Lafayette Place. Toronto: Vannevar & Co.

The September number of the above work contains the following articles:—Congestive Neurasthenia or Nerve Depression, by E. G. Whittle, M.D.; The Art of Embalming, by Benjamin Ward Richardson, M.D.; The Etiology, Diagnosis and Treatment of Tuberculosis, by Dr. H. Von Ziemssen; Psycho-Therapeutics or Treatment by Hypnotism, by Dr. C. Lloyd Tuckey; Sexal Activity and the Critical Period in Man and Woman, by Dr. Louis De Sere. Index and Contents for Vol. III.

Inebriety: Its Etiology, Pathology, Treatment and Jurisprudence, by Norman Kerr, M.D., F. L.S., Fellow of the Medical Society of London; President, Society for the Study of Inebriety; Chairman, British Medical Association Inebriates' Legislation Committee; Consulting Physician, Dalrymple Home for the Treatment of Inebriety; Corr. Mem. Medico-Legal Society of New York; Corr. Sec. American Association for the Cure of Inebriates. Second Edition. London: H. K. Lewis, 136 Gower Street, W. C., 1889. Toronto: Vannevar & Co.

This is a book which should be in every physician's hands. It is a classic on the subject, and now that the profession at least have learned to look upon inebriety as a disease, we take it that each of us should be educated, regarding that disease. The book is beautifully printed, and we heartily recommend it to our readers as worthy of a careful perusal.

Institutes of Economics: A Text-book for College Classes. By E. Benjamin Andrews, D.D., LL.D., President of Brown University, late Professor of Economics and Finance in Cornell University. 228 pages. Cloth. Introductory price, $1.30. Boston: Silver, Burdike & Co., 1889. Toronto: Carveth & Co.

This is a succinct manual of political economy for the class-room, on a plan thoroughly its own. Its pre-eminent aim is to be a first-rate teaching-book. Its chief peculiarities in point of method are: 1. The utmost brevity which can be made to consist with clearness, indispensable amplifications and illustrations beyond this being referred to notes. 2. Thorough and conspicuous analysis, general and special, greatly aiding pupils both to master and retain the thought. 3. Encouragement to side reading, each paragraph being introduced by references to the best accessible authority upon its theme, and more recondite works, in various languages, named for the behoof of teachers.

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Original Communications.

ON DYSPEPSIA.*

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Of all the ills that flesh is heir to, derangements of the digestive processes are doubtless the most common and productive of most suffering, and therefore, with the causes of these derangements, and the best manner to give relief from them we cannot be too familiar. Not only do we suffer from the digestive system itself through derangement of its functions, but many of the derangements and diseases of other organs and parts are secondary to and caused by the imperfect performance of the digestive functions. The more thoroughly we comprehend the digestive process in even its minutest details, and consider the important relations the various steps bear to each other and to the physical economy generally, the more will we be alive to the vital importance of caring for these organs whose duty is to furnish all other organs and parts of this complex mechanism the wherewithal to maintain their integrity, and enable them to perform their allotted functions. So long as these functions are properly performed we are well, and work is a pleasure. We retire at the close of the day to enjoy dreamless repose, waking with the morn to enter on a new day's work in which no duty is irksome, and with a temper that no cross ruffles. Our meals find us with appetites that relish the plainest fare.

The answer of the wife of the good-natured husband to that of the ill-natured one, was, if coarse and blunt, also philosophical. When asked how she managed to keep him so good natured, answered, "I feed the brute." The following from Sidney Smith humorously illustrates the relation between indigestion and low spirits. I quote from Lauder Brunton's Lettsomiam Lectures. He says: "Happiness is not impossible without health, but it is very difficult of attainment. I do not mean by health merely an absence of dangerous complaints, but that the body should be in perfect tune, full of vigor and alacrity. The longer I live the more I am convinced that the apothecary is of more importance than Seneca; and that half the unhappiness in the world proceeds from little stoppages, from a duct choked up, from food pressing in the wrong place, from a vexed duodenum or an agitated pylorus. The deception as practised upon human creatures is curious and entertaining. My friend sups late; he eats some strong soup, then a lobster, then some tart, and he dilutes these esculent varieties with wine. The next day I call upon him. He is going to sell his house in London and retire to the country. He is alarmed for his eldest daughter's health. His expenses are hourly increasing, and nothing but a timely retreat can save him from ruin. All this is the lobster; and when over-excited nature has had time to manage this testaceous incumbrance, the daughter's health recovers, the finances are in good order, and every rural idea effectually excluded from the mind. In the same manner old friendships are destroyed by toasted cheese, and hard salted meat has led to suicide. Unpleasant feelings of the body produce corresponding sensations in the mind, and a great sense of wretchedness is sketched out by a morsel of indigestible and misguided food. Of such infinite consequence to happiness is it to study the body."

Digestion consists of two processes, the solution of the food and the absorption of the liquid thus formed, and the digestion of a meal is not complete until its soluble portion has been liquified or emulsified and absorbed into the lymphatics or blood-vessels. By *dyspepsia* we mean difficulty, imperfection, or both, in the performance of these processes. As with the general health, so it is with the digestion, it may be strong or weak. The function of digestion in some is so strong as to enable them to eat almost anything with impunity, as turnips, quantities of fat, pastry, etc., while

* Read before the Toronto Medical Society, Oct. 1st, 1889.

with others such things would cause great distress, relieved perhaps only by vomiting or diarrhœa. Yet the digestion in both may be perfectly healthy, only in the latter the function is easily overtaxed. This may be a wise provision of nature to prevent more serious lesions of the kidneys or liver.

First in the digestive process, is mastication. With the mass of people, food is eaten too hurriedly and only partially masticated, and, therefore, is more difficult of digestion. The objects of mastication are manifold. The primary object is, of course, the minute division of the food, so that the digestive fluids may easily gain access to all parts of it. Almost of equal importance, is the admixture of the food with saliva, the flow of which is stimulated by mastication. The importance of the saliva in digestion is widely under-estimated. That it aids greatly in the digestion of the starchy foods we can readily convince ourselves by chewing a crust, and observing the sweetness developed as it becomes converted into a pulp. The saliva, also, owing to its alkalinity, is an efficient stimulant to the secretion of the acid gastric juice, which is also stimulated, reflexly, by the act of chewing. Mastication also stimulates the circulation so that the heart beats more forcibly and frequently, sending an increased supply of blood to the nerve centres, which, as part of the general result, leads to increased secretion of the digestive fluids which are probably improved also in quality. The mere act of masticating a small piece of crust, raised my own pulse, while writing this, from 60 to 72 beats per minute. There is still another object to be attained by full and complete mastication; that is, to enable us to judge when we have eaten enough, and so prevent us from eating too much. No one will dispute that the mass of people eat too much; they do so chiefly because they eat too fast. To understand how slow eating prevents over eating, we must know the causes of hunger and the means by which it is satisfied. I think Lauder Brunton's theory as to hunger is the correct one. He thinks the cause is two-fold: "First, a certain condition of the stomach, probably consisting in distension either of the lymphatics or capillaries of the mucous membrane, which is relieved when food is ingested and secretion begins. Second, a condition of the system which is not removed by the mere presence of food in the stomach, but requires for its alleviation the absorption of nutritive material into the blood."* This second condition is well illustrated by many dyspeptics who have voracious appetites, and "can eat every hour of the day"; also in cases of tubercular disease of the mesenteric glands when patients eat enormous quantities of food. In neither of these does sufficient nutriment reach the tissues. Hence, it is evident that if the meal is eaten too hurriedly there will not be time for the first part of it to be digested and absorbed to supply the nerve centres and tissues generally with the nourishment they demand before sufficient is eaten, and until this demand is supplied the feeling of hunger is not fully appeased, and before we are aware of having had enough of food, the stomach may be overloaded. Looking at the subject in this light, we see not only the necessity for complete mastication slowly performed, but also the desirability of the partaking of our meals in a quiet, deliberate manner, with a due amount of light conversation; we also see the great advantage of the intervals of rest between the courses of a dinner. Many business men and others rush through their mid-day meal so hurriedly that good digestion is impossible. A few days ago one of them said to me that often he would not know that he had eaten did he not see his empty plate before him; yet he is surprised that his stomach does not digest his food properly. The good effect of mental quiet on digestion is well seen in the two extremes of life. The healthy child or youth scarcely knows he has a stomach, and "in the sere and yellow leaf," when men have left the work and worry of life behind, it is the rule to find them eat, if not with the gusto of youth, at least with great satisfaction and digest without discomfort, even though they may have suffered from indigestion during the busy portion of their lives.

In the matter of gastric digestion, recent investigations have added much to our knowledge of the process, as well as of its derangements and the best means of correcting them. From the now classic descriptions of the late Dr. Beaumont, we have obtained invaluable information as to the appearances of the stomach in both health and disease. At rest, the gastric mucosa is of a pale pink color and covered by a thin coating of clear

* Brunton, "Disorders of Digestion," page 117.

mucus of alkaline reaction. The introduction of food causes a deepening of color from an increased flow of blood, the secretion of the gastric juice which trickles down the sides of the stomach, and gentled peristalsis. This continues during the digestion of a meal, one to four or five hours, after which the condition of quiescence is resumed.

Instead of the mucous membrane of the stomach being of a pink color, it may be pale and flabby, so that the introduction of food into it is not followed by a due increase in the blood supply, and the gastric juice is both deficient in quantity and defective in quality. There is no feeling of hunger but a fair quantity of food may be taken, which, not being digested soon lies heavily in the stomach, and ferments with formation of gas and often acidity. Such is the condition in atonic dyspepsia.

Much has been done lately in determining the defects in the gastric juice in the various diseases of the stomach. To obtain gastric juice for examination it is best to give two or three ounces of toast and a little water on an empty stomach; the water soon absorbs, and the toast while promoting a flow of gastric juice does not alter it. As soon as the gastric secretion shall have attained its maximum a small stomach tube is passed, to it is attached a syringe, by which suction is slowly made. As soon as sufficient juice is obtained the tube is withdrawn, its contents filtered and examined. The HCl. is the ingredient that is found to vary most, and it is abundantly proved that it is the most important one. In true acid dyspepsia it is in excess but this is not a common condition. The HCl. is much more frequently deficient or even absent as in atonic dyspepsia and many cases of gastric catarrh. In atonic dyspepsia there is debility of the system generally so that the circulation is feeble and the nerve centres depressed; therefore, the nerve centre does not respond to the stimulus of the food, with the result that the flow of blood to the stomach is not increased, and without the required blood supply, the gastric glands c not secrete either good or plentiful gastric j ce; its HCl. will be scant, if present at all. l nce the decomposition of the food, the flatulence, t acidity, the heartburn, and the distress. It has b n fairly well established that gastric peristalsis i lue to the presence of HCl., hence absence of t s acid will be followed by greater or less dilata- t n of the stomach from retention of its contents.

In the treatment of atonic dyspepsia we have many things to consider. The stomach, if loaded with offending material, must be relieved by an emetic, or by washing. Then we may seek to promote secretion by giving alkalies, which act locally on the glands, stimulating their acid secretion. Bitters, as columba, or gentian, are given to irritate the stomach more powerfully than the food does; they act on the nerve fibres in the mucous membrane, and thus stimulate an increased flow of blood. Nux vomica locally has the same effect, and, after its absorption, it stimulates the nerve centres, rendering them more susceptible to stomach impressions. If there is anæmia, iron should be given, to improve the quality of the blood.

In the matter of diet, nothing more than general principles can be laid down. Intelligently used, perhaps the late Austin Flint's rule should be sufficient: "The diet should be regulated by the appetite, the palate and by common sense." Food eaten with a relish is usually wholesome, even though it is sometimes contrary to our preconceived notions. Experience must needs be the guide to our common sense, and where people have no experience, as in recovering from typhoid fever, for example, they had better be guided by that of others. It is not so often *what* we eat, as *how* we eat, that "upsets" our stomachs. Not a few people unnecessarily eliminate many articles of food from their diet, under the impression that they cannot digest them. Such an one presented herself to me not long ago for advice; she could not take meat, eggs or milk. An alkaline stomachic was prescribed; she was assured it would enable her to digest all these articles of diet, and she was requested to take them in moderation, and without worry. On returning a few days afterwards, she gleefully reported that they all agreed with her from the first, and that she now felt well.

In cases of distress, notwithstanding such treatment, five to ten minims of dilute HCl. may be given with advantage, during or after the meal, to supplement the deficiency in the gastric juice. As improvement takes place, the need of it will disappear. Pepsin may be added, but its use in my experience has been disappointing. For the relief of acidity and pain occurring an hour or two after meals, Sir William Roberts, in his address before the late meeting of the British Medi-

cal Association, strongly recommends the bismuth lozenge (B.P.), which owes its antacid property to 3½ grains of chalk and 2½ grains of magnesia, the bismuth being inert. He suggests as a better formula, the chalk and magnesia, with one grain of sodium chloride to give it a sharpness that will promote the flow of saliva. The lozenge should be placed on the back of the tongue and allowed to slowly dissolve, so as to cause a concurrent flow of saliva, which will materially aid in overcoming the acidity. They are to be used only when the gastric pain is distinctly present and greater than can be well borne.

Constipation, if it exists, will require appropriate treatment; also attention to bathing and general hygiene.

CHRONIC GASTRIC CATARRH.

This condition exists in a large number of chronic dyspeptics. The catarrhal condition varies in degree from the mildest, between which and atonic dyspepsia there is no sharp dividing line, and the most severe, in which there is persistent vomiting and extensive abrasion of the gastric mucosa. The causes of it may be the habitual ingestion of food, excessive in quantity or irritating in quality, alcohol and other stimulants; or it may be secondary to diseased states of other organs, as of the liver, kidneys, lungs, or heart, by which the circulation is impeded or the blood rendered unsuitable by retention in it of excrementitious matters. In the mildest cases the symptoms are not distinguishable from those of atonic dyspepsia, in fact, there is a general atony present. In others there is a craving for food, which is satisfied, or, I might say, satiated, by the first mouthful or two, a feeling of over-distension, and, it may be, nausea following; or even the odors of the food may be sufficient to replace the craving by feelings of repugnance. How often women experience this while cooking the dinner. As we all know, such craving may continue for a day or two, to be succeeded by a so-called bilious attack, and many sufferers know the significance of such craving, and, by the exercise of self-denial, aided by a cholagogue purgative, they are able to forestall the attack. In such cases there is more or less coating of the stomach with tenacious mucus, containing many epithelial cells. Beneath this the mucous membrane is congested and highly irritable. The gastric juice, on examination, is found to be deficient in HCl., and what is present is quickly destroyed by the alkaline mucus. The presence of food, or even its odor, is too great a stimulant to the unhealthy mucous membrane, and acts much as an emetic does in the healthy stomach. The craving for food is due to the demands of the nerve centres and tissues for more nourishment, their supply being insufficient on account of the imperfect digestion. The mental depression often present, the headache, the coated foul tongue, and the high-colored urine loaded with urates, in short, the so-called bilious condition, are probably due, not to bile constituents in the blood as commonly supposed, but to absorption of the poisonous alkaloidal products of the decomposition of food in the stomach and bowels.

Lauder Brunton has advanced the theory that part of the function of the liver is to intercept and turn back in the bile all such alkaloid products, and is able to do so effectually under ordinary circumstances; but when an excess of these deleterious substances are poured into the portal vein, the circulation in the liver is impeded, owing to the low pressure of the blood in the portal vein, and then the liver cells become unable to eliminate all these poisons, and some of them escape into the hepatic vein and so into the general circulation. On this theory it is easy to explain the efficacy of the so-called cholagogue purgatives. Acting on the duodenum as well as the rest of the intestinal tract, they sweep out the food with all its decomposing products, also the copious discharge of bile, loaded with these poisons, that is being poured into the intestine, to be re-absorbed and carried again to the overburdened liver—unless removed by purging. The supply being thus stopped, the emunctories are not long, as a rule, in removing from the blood what deleterious matters it may contain. The stomach, however, may be in such a state as to continue to furnish the fermentative products; in that case it too should be cleansed, either by an emetic, or, much better, by the use of the stomach tube. While there are no means within our reach to compare in efficiency with lavage, yet in mild cases it is rather unpleasant to be resorted to; it would be like driving a nail with a trip-hammer. In these, restrictions of diet, mild cholagogue purgatives and alkaline stomachics suffice. The cholagogue may be given at

bedtime and followed in the morning by some saline bitter water, preferably Hunyadi, judging from my own experience. A wineglass of Hunyadi in a large goblet of hot water, slowly sipped while dressing, will give most people a copious dark bilious stool after breakfast; the slow sipping stimulates the circulation, and the bulk of water serves to flush out the mucus from the stomach—which is said to be a tube when empty. The water, after absorption, will then flush the kidneys.

To soothe the irritable gastric mucous membrane, such sedatives as bismuth and hydrocyanic acid may be given, to which soda may be added to dissolve the mucus and stimulate gastric secretion; as soon as the irritability is allayed, bitters may be added, as in atonic dyspepsia.

In the severer cases of *chronic gastric catarrh* there is considerable thickening of the mucous membrane, with destruction of gastric tubules. There is an abundant mucous secretion, rich in epithelial cells, more or less dilatation of the stomach from lessened or arrested peristalsis, and but scant secretion of gastric juice, and what is secreted contains little if any HCl. There is no appetite, just as there is none in phthisis or the acute diseases. I need not dwell on the picture, you all know it. Excess in alcohol is the most frequent cause, but there are many others.

Judging from my limited experience in the management of these cases, there is only one plan of treatment that offers satisfactory results, viz., lavage. It is, besides, the only rational treatment, inasmuch as it is the only one that strikes at the root of the trouble by relieving the stomach from the constant irritation that keeps up the inflammation. The washing out of the stomach should be resorted to regularly and systematically, using either plain water or a weak solution of bicarbonate or biborate of soda, or boracic acid. Sufficient fluid should be used to remove all the mucus, after which a little nourishment should be given, such as milk (raw or prepared), broth with a raw egg stirred in it, and toast; the coarser foods should be withheld until the condition of the stomach is ameliorated somewhat. A few drops of HCl. may be given with advantage after the food to hasten its digestion, to inhibit the germs of fermentation, and to stimulate the peristalsis of the stomach, forcing the contents onward into the intestine as soon as digested, thus lessening the tendency to dilatation. HCl. given without first removing the mucus, would be useless, as it is destroyed in coagulating the mucus; therefore in mild cases not requiring resort to lavage, it is useless to give HCl. after food.

The more severe cases may require perseverance with the tube for some time, before much benefit will be apparent. I had one such case a few months ago, in the Toronto General Hospital, due to prolonged use of alcohol, in which it was only after some weeks of regular washing that vomiting of offensive mucus ceased and food could be taken with fair comfort. Success was at one time despaired of, but he left the hospital with comparatively fair digestion.

PATHOLOGICAL RELATIONS BETWEEN BONE-MEDULLA AND SPLEEN.*

BY DR. CHAS. M. SMITH, ORANGEVILLE, ONT

Hodgkin's Disease.—The case which first attracted my attention to this subject, was one of general lymphadenoma occurring in a male aged 56.

Enlargement, tenderness and hypersecretion of the parotid, submaxillary and sublingual glands were the first symptoms apparent. The cervical and subcutaneous groups then became involved, while palpation proved that the mesenteric glands were also affected. Asthenia rapidly developed, followed by coma, continuing for forty-eight hours, relieved by a brief period of semi-consciousness and ability to speak, succeeded again by stertorous breathing for two or three hours; one severe general convulsion and death; a period of not more than three weeks having elapsed from my first visit. A section of the spleen, which was somewhat enlarged, exhibited upon its surface numerous masses varying in size from a grain of rice to that of hazel nut, and presenting a grayish-white or drab color. These bodies appeared in lieu of the normal malpighian corpuscles. My knowledge of the fact that a fracture of the tibia and fibula had been sustained some seven or eight years previous to the date of the patient's illness, led me to examine the site of said fracture. I

*Abstract of a paper read at the Annual Meeting of the Ontario Medical Association, June, 1889.

found the normal medulla replaced by a *red*, lymphoid marrow; and in order to discover whether this condition bore any relation to the previous injury, I examined the femur of the same leg and the tibia of the opposite side. The red fœtal marrow was present also in these bones.

Leukæmia.—A well-marked case of this affection occurred in my practice in 1882, in the person of a married lady, nulliparous, and residing in a non-malarial region. In this case the enormously hypertrophied spleen filled the left hypochondriac, lumbar and iliac regions, encroaching largely on the epigastric and umbilical areas. The marrow of the sternum, os calcis, and ulna respectively was examined. The most constant elements found were nucleated red corpuscles and the crystals known as Charcot's. In appearance the medulla from the various regions differed in a much less degree than in the normal condition. The long, short and flat bones alike were characterized by a marrow which was seen to contain large granular nucleated cells, other cells resembling colorless blood corpuscles, and smaller forms which were classed as lymph cells. The spleen was of a deep violet red and presented adhesions to the abdominal wall. On section it was found to be firmer than the natural tissue, exhibiting the trabeculæ clearly and showing no traces of the malpighian bodies, when examined with a power of 50 diameters.

Osteo-Myelitis.—The autopsy in this case, one of chronic circumscribed osteo-myelitis, revealed an extensive cavity in the head of the right tibia, the wall anteriorly composed merely of periosteum and the cutaneous tissue, and posteriorly and laterally of a thin shell of compact tissue. The finger introduced into the cavity distinguished the ragged remains of cancellated tissue above, around and beneath; while lying partially adherent, was a tolerably firm clot. The leg could be carried with ease in any direction, allowing itself to be brought anteriorly to form almost a right angle with the thigh. The histological elements were giant-cells and granulation tissues. The presence of the large lymphoid cells and granular substances in the specimen, brought to the observer's mind, in a striking manner, the fœtal marrow or that found in the *short* bones of the adult. They are always found in normal or abnormal tissues in contact with bone undergoing absorption.*

Some pathologists† hold that the lacunar cell is the transforming power in bone-absorption; others ‡ assert that the granulation-tissue mentioned above is the factor of destruction or rather solution, and give as an instance, the effects produced upon ivory pegs used in operations for false joints. Billroth claims that the granulations dissolve the lime-salts by virtue of the lactic acid contained within their substance. On the other hand some pathologists§ affirm, that the granulation-tissue is alkaline, and direct attention to the fact that the ivory pegs are only occasionally eroded, and that sequestra withstand the process for long periods, while living bone is absorbed rapidly; concluding, therefore, that the process is a vital act

The spleen on examination was found to be adherent to the diaphragm, somewhat larger than normal, and exhibiting a mottled appearance; the surface being marked by light grayish-yellow areas separated by deep violet interspaces. The differently tinged areas were found to correspond to the external border of pyramidal portions of the tissue, which, owing to the peculiar distribution of the non-anastomosing || arteries of the spleen depended upon a single terminal vessel for their vascular supply. At the point where this arteriole terminated in a leash of pencils an embolus could be discerned. The adjacent pulp-tissue (that lying towards the external border of the organ) was of a dirty-white, or yellow color in parts wherein sufficient time had elapsed to allow of the invasion by leucocytes. The violet-colored portion of the surface corresponded to areas infiltrated with blood from the nearest pervious vessel and possibly from the adjacent vein, which, owing to its valveless condition, permitted such regurgitation.

Syphilis.—In examining the tibia of a patient who had suffered from tertiary syphilis, I found the usual gurmmatous material involving the medullary canal, while, the compact tissue was redder and more spongy or larcunar than normal.

The spleen was lardaceous or amyloid throughout. The surface of a section responded both to

*Barwell. † Virchow, Rokistanky. ‡ Billroth. § Volkman, Barwell. || Virchow, Cohnheim.

the iodine and methyl-violet test. Under a power of 250 diameters, the chief alterations were noticed in the trabeculæ and walls of the venous sinuses. The capsule exhibited, scattered over its surface, light-colored portions, resembling in density cartilage, or even, in some places, calcareous plates found in the arterial walls in certain instances. This form described above is not always present—for instead of being diffuse, the morbid changes may effect chiefly the malpighian corpuscles and produce the appearance known as "sago-spleen." The presence in the same organ of the two forms of degeneration, namely, lardaceous and calcareous, would tend to make me adopt the view of Kieber and Virchow, which, while differing somewhat from those of Cohnheim, would appear more probable than those of Reindfleisch and Billroth, who adhere to the infiltration theory.

Myeloid.—A brief reference to some of the appearances found in the spleen of a man whom I attended in 1880 for myeloid tumor of the scapula, may be of interest in connection with the subject of this paper. You are no doubt familiar with the histology of the neoplasm as it affects *bone*. The spleen in this case was larger by at least one-half then in health, was extremely soft, of a very dark color, and giving way on very slight pressure, resembling, in fact, a large blood-clot rather than an organized structure. The prevailing cell noticeable on microscopical examination was a large many-nucleated one, similiar to that found in the foetal marrow and the medulla of short bones or diploe of flat ones in the adult. The question arises, whether the multiplication of these cells was owing to an infiltration or to a transformation *in loco* and hyperplasia of elements normally present in the spleen.

Typhoid Fever.—I am not aware that any connection has been traced between morbid changes in the bone-medulla and the splenic hyperplasia, which reaches its maximum at the height of the ease and dimishes with convalescence from enric fever. I have observed the sequela of periitis of the tibia in one case and of the ulna in other, occurring in patients who had exhibited arked symptoms of perisplenitis.

Relapsing Fever.—According to Ponfick * the most constant changes noticed at autopsies performed on subjects of "*Typhus recurrens*," are those of the spleen and marrow. In the latter there is proliferation with subsequent degeneration of the lymphoid cells, with multiplication of the nuclei on the walls of the minute vessels and fatty degeneration of their coats. Abscesses occur chiefly in the cancellated extremities of the long bones, especially the tibia.

Spleen.—This organ is found enlarged when the patient has died in the febrile stage. The pulp is swollen and swells up above the surface of the section. The malpighian corpuscles are grayish or grayish-yellow, increased to the size of a hempseed. Hæmorrhagic infarction, such as described under the head of osteo-myelitis, also exists to a large extent. According to Ponfick these are chiefly venous, the arterioles being patulous.

Pyæmia and Septicæmia.—Globular bacteriæ have been demonstrated in the medulla and splenic tissue as well as in the blood of those dying from pyæmia, whilst the rod forms are equally abundant in those tissues in septicæmic cases.

Glanders.—Both marrow and spleen become affected secondarily in this disease. The specific microbe is particularly abundant in the latter organ. Investigators have not devoted special attention to the histology of the medulla.

Anthrax—The pathological alterations in spleen and bone-medulla in this virulent affection are amongst the most constant—the tissues of the former swarming with micrococci and bacilli, while the normal, fatty marrow is replaced by a yellowish or greenish-yellow material, occasionally of a tallow-like consistency, and exhibiting the peculiar bacillus although in less abundance than the great blood-lymph gland.

While I have endeavored to lay before you some of the morbid affections of these homologous structures, with a view of bringing their functional analogies more forcibly to our minds, I must, at the same time, apologize for the imperfect nature of these observations. The field is an extensive one, and is worthy of more attention at the hands of skilled histologists than has yet been awarded to it. I may, in closing, Mr. President and gentlemen, quote the modest words used by that great pathologist and beloved teacher, Paget, "If now

* Virchow's Arch, Vol. lxxii: p. 154.

I leave the hearer to consider for himself the questions that may thus be asked, I shall but fulfil a purpose kept in view in this paper, the purpose, namely, of offering materials for thought upon subjects of which I have not knowledge."

CLINICAL LECTURE—UNIVERSITY HOSPITAL, PHILADELPHIA.

BY H. C. WOOD, PROF. OF NERVOUS DISEASES.

The Problems to be Decided in a Case Lingering on the Border-line of Insanity.

There is no exact standard to which we can compare a case of suspected insanity; there is no fixed line over which a patient steps which allows us to declare, without further study, that matters stand thus and so. Insanity is a condition of mental unhealth which deepens so gradually and insensibly, that the exact time when it is undeniably present is often impossible to determine; just as the shore along the ocean's edge glides imperceptibly down into unfathomed depths, so do the symptoms in the ordinary case slip gently into that curious condition which we call, for convenience, insanity. The knowledge of this fact is ever present in the alienist's mind when confronted with such cases, but the embarrassment which the call for a diagnosis may produce, is not due so much to the medical aspects of the case as to the legal; for, in the real essence of medical inquiry, it makes no actual difference in the treatment how near the patient hovers to the line and whether he has positively crossed it or not.

In taking up the systematic study of a case of suspected insanity, we find that there are three sets of symptoms which we must carefully consider before we can come to any definite conclusions:

1. Changes in the character of the patient.
2. Changes in the emotional nature of the patient
3. Changes in the mental acts of the patient.

It is claimed by some alienists that one symptom is absolutely characteristic of the insane; it is the "insane delusion." Its presence, they claim, is essential to indicate insanity; but its importance as a symptom is greatly magnified, for there are cases of well developed mental alienation in which there may be no delusions present. For our more perfect understanding, we will define a delusion to be a false belief capable of demonstration, but out of which a patient cannot be reasoned: as for illustration, you close your eyes, and imagine you hear a voice; you open them and see that there is no one present and hence no possible source for the voice, and you recognize that you have been subject to delusion; but if you persist in believing that you heard the voice, then it becomes an insane delusion. You correct the testimony furnished you by one sense with that furnished you by another; the essence or the basal condition is the loss of the power of judgment or reason. There is a necessity that the matters handled shall be capable of absolute proof; the Brahmin cannot call the Christian insane, for their respective beliefs are not capable of positive demonstration, nor has the Christian a similar right.

In regard to the first query, Has he changed in character? we must not make the mistake of comparing a patient with any standard of right and wrong, but with his previous condition: as he is —as he was. If he was affectionate, is he so now; if he was of a melancholy cast, is he unduly hilarious now, or *vice versa*; and so on through the elements which go to make up character. The emotions, which are closely allied to the character, should also be studied with reference to their condition in the past; be careful to see if a change has actually taken place. A profoundly depressed or an excessively hilarious state of mind may have always been the patient's condition. We divide insanity into two forms: one, where there is distinct evidence of organic brain disease; the other, called "pure insanities," in which there is no dependence on organic change; the further division into acute and chronic we will not consider to-day.

With this introduction, let us study this case. A woman, æt. 42, happily married; has a number of healthy children; she says she knows the cause of her ailment. Two years ago, suddenly the neighbors began to abuse her; this persecution grew until, in last January, there arose in her a dread of something impending, which depressed greatly her spirits. Her trouble generally took the shape of a lion which she never saw nor heard, but to protect herself against which she had hid hammers and hatchets in convenient places over the house. She also heard voices calling to her all the time; she had looked for the persons to whom she supposed they belonged, but as she ap-

proached the voices apparently receded from her; she felt sure that the sounds did not originate in her own head. They gradually narrowed down to one voice, which never praises her, but is always abusing and shouting at her. She has no headaches, sleeps fairly well, cannot read because so disturbed by the voice, does her own housework; and she shows that she has reached her present condition not rapidly, but rather slowly. Her sister tells us that she is sad and depressed, and has attempted suicide rather in obedience to the "voice" than from any desire to die. There is no hereditary taint in her family.

The first emotional changes were in the form of a feeling of impending calamity; then, from her account, there seems to have been no absolute hallucination of sight; but notwithstanding her assertions, we may believe that, at the time of her extreme dread, they probably existed. She heard voices, but at first tried to disprove their existence. Is she over the line, and if so, what is the form? She has one of the more acute types of paranoia, the new name for the outcome of gradual ill-development of the brain, called "melancholia." The character of the delusion always corresponds to the emotional change, as in melancholia; the subject believes himself to be hated and persecuted by every one. Some alienists regard the delusion as arising from the emotional change, and other specialists hold that it is just the other way. Probably they have one and the same origin.

Classification in brain troubles is unsatisfactory, for insanity is a symptom, not a disease, just as dropsy is an expression of disease, not a disease itself; but for convenience we group together those forms in which, as yet, we can detect no organic change, while in reality they may be widely separated.

The *prognosis* in these cases is doubtful, not positively bad, for sixty per cent. of the cases of acute melancholia get well. When the attack is slow the prognosis is bad, for there is greater ance of the mental changes remaining permant; when the onslaught is sudden, then the out- ok is better.

There is but little direct treatment to be done. ight she go to an asylum? This depends largely her surroundings. I hold that the asylum has same position to the insane patient as the eral hospital has to a surgical case. If all that is required can be had at home, I should say, keep her there. If she remains there, it keeps her from herself, for she is still able to do her own housework, and the majority of inmates in an asylum are left to mope and study themselves—until they sink deeper into the clutches of their malady. But she has attempted suicide, impelled by the "voice"; this may occur again to-morrow. At home it will be impossible to protect her; or this voice may demand that she murder her husband or children, for the most dangerous class of lunatics are of her kind. This may exist with a great deal of mental soundness, which to laymen might prove the general sanity of the patient. Hence use moral and mental means to combat her trouble; give her occupation, pleasant agreeable tasks; treat other symptoms as they arise; see that she gets plenty of good nourishing sleep, and remove all irritating elements of her life.

Correspondence.

OUR EDINBURGH LETTER.

(From Our Own Correspondent.)

I shall this month give you in brief a few points regarding some of the cases presented to the Post-Graduate Class at the Edinburgh Royal Infirmary, by Dr. Allan Jamieson, at his Skin Clinic.

Case 1. A chronic localized psoriasis, non-specific.

℞—Chrysarobin, ... gr. x.
Liq. carb. deterg., ... ♏ x.
Acidi salicylici, ... gr. x.
Ung. lanolini, ad., ... ℥ j.
M.—Fiat unguentum.

Sig.—Rub in a small portion of the ointment at night, and wash off in the morning; and use an over-fatty potash soap to wash the parts twice a day.

Case 2. Eczema of the scalp — *Eczema seborrhœa.* Treatment.—Shave the hair from the scalp, and then apply the following poultice to remove the crusts, and continue their application as long as any improvement is noted:

℞—Acidi borici, ... ℥ ij.

Sig.—Add a teaspoonful of the powder to a tablespoonful of cold water starch; mix with a little cold water, then pour in a pint of boiling

water and stir till melted; let stand till cold; spread the cold starch thickly on pieces of cotton, cover with muslin, and apply to the part, changing the poultices every few hours.

When no further improvement is noticed from the application of these poultices, then apply—

℞—Resorcin, ... gr. x.
Lanolini,
Zinci oxidi,
Pulv. amyli, ... āā ʒ ij.
M.—Fiat unguentum.

Sig.—Apply twice a day.

Case 3. Alopecia areata. A stimulant plan of treatment was adopted.

℞.—Liquoris ammoniæ fort.,
Chloroformi,
Olei sesami, ... āā ʒ ss.
Olei limonum, ... ʒ ss.
Spiritus rosmarini, ad., . . ʒ iv.
M.—Fiat lotio.

Sig.—Apply lotion to bald patches with a sponge twice a day, and wash scalp with an over-fatty potash soap twice a day.

Easton's syrup was also given internally three times a day.

Case 4. An eczema on the hands of a baker, due to the irritation caused by the flour—a trade eruption.

Apply the boracic acid and starch poultices as in case 1, and when no further improvement is noticed, apply *Lassar's paste.*

℞.—Acidi salicylici, ... gr. x.
Lanolini (*Liebreich*),
Vaselini optimi,
Pulv. zinci oxidi,
Pulv. amyli, ... āā ʒ ij.
Misce leniter teranda, fiat past.

Sig.—Apply twice a day.

Another trade eruption due to the contact with chemicals used in the manufacture of morphia, was treated in the same way.

Case 5.—Scabies.

℞.—Naphthol, ... ʒ j.
Ung. simp. ad., ... ℥ j.
Fiat unguentum.

Sig.—Apply at bed-time.

Case 6. Tinea tonsurans.

Dr. Jamieson believes the chloroform test for this affection is as pathognomonic as the microscopic test. Chloroform is applied to the affected spot by means of a fine spray; after a few minutes the chloroform will have caused the diseased hairs to turn white, which can be easily recognized by the aid of a pocket lens.

Treatment.—The hair must be shaved closely from the scalp, and kept so until the disease is cured. After the scalp has been shaved, apply—

℞.—Sulphuris precipitati, . . . ʒ ss.
Hydrargyri ammoniati, . . . grs. x.
Hydrargyri sulphureti nigri, . grs. x.
Misce et adde.
Olei sesami, ... ʒ ij.
Creasoti, ... ♏ x.
Adipis, ... ʒ vj.
Fiat unguentum.

Sig.—A small quantity to be well rubbed in with a stiff brush twice a day.

Case 7. Alopecia areata, due to tinea tonsurans. The lotion prescribed in case 3 was ordered.

Case 8. Pruritus of the scrotum, due to a varicose condition of the veins. Hot baths were ordered to be taken at night. A suspensory bandage to be worn, and the following lotion to be sponged on the parts night and morning:

℞.—Menthol, ... ʒ j.
Spts. vini rect., ... ℥ iij.
Glycerini, ... ʒ iss.
Aq. dest. ad., ... ℥ vj.
M.—Fiat lotio.

Sig.—Apply to the parts with a sponge, night and morning.

Case 9. Comedones.—Comedones to be squeezed out by presure with nails, a watch-key or instrument made for the purpose. Face to be carefully washed with soap and *hot* water, and dried with smart friction, and at night apply—

℞.—Kaolini, ... ℥ ss.
Glycerini, ... ʒ iij.
Aceti, ... ʒ ij.
Fiat lotio.

Sulphur may be added to this if a more active remedy is indicated.

Case 10. Sycosis of upper lip, caused by, or complicated with a chronic nasal catarrh.

Add ʒj. of boracic acid and ʒj. of common salt to a pint of hot water, and draw the solution up

the nose frequently. Dry the parts and apply to inside of nose.

℞.—Acidi salicylici, ... gr. x.
Zinci carbonatis, ... ʒ j.
Vaselini, ... ʒ j.
Cerati galeni, ad., ... ʒ j.
M.—Fiat unguentum.

The hair must be shaved from the parts daily, and then apply the boracic acid and starch poultices until the crusts are softened, and inflammation subdued. Water as hot as can be borne, should be used after shaving. When the poultices are discontinued, then apply the following:

℞.—Sulphuris precip., ... ʒ i.
Creasoti, ... ♏ x.
Vaselini, ... ʒ j.
M.—Fiat unguentum.

Sig.—Rub in a small portion of the ointment twice a day.

Later, a solution of nitrate of silver, 16 grains to the ounce of sweet spirit of nitre, should be painted on at intervals.

Case 11. Eczema, with a great amount of oozing. Apply the boracic acid and starch poultices for a few days, then—

℞.—Gelatinæ opt., ... 15.0.
Zinci oxidi, ... 10.0.
Adipis recentis, ... 10.0.
Glycerini puri, ... 65.0.

Combine the ingredients carefully by aid of a water bath, then add 2% of salicylic acid and dispense in a deep tin.

Sig.—Place the tin in a basin of boiling water till the contents are melted to the consistence of milk, taking care that no water gets into the tin; then paint on, and cover with a thin film of absorbent cotton wool. G.

Selected Articles.

MICROBIC LIFE IN SEWER AIR.

BY ALFRED CARPENTER, M.D., J.P.

(Continued from October No.)

Let us go back to

THE HABITAT OF THE GERM.

Many attempts have been made by various observers to catch the organism. So difficult is this that Professor Nageli, of Munich, endeavored to show by a series of experiments which he carried on for some years that they are not given off by moist surfaces, and Professor Frankland said, in 1877, that nothing particulate was given off from running sewage; but as he has also shown us since then that the bursting of bubbles disseminated particles of lithia in solution, it is evident that whenever bubbles burst any particulate matter in the substance of the bubble might be disseminated as well as the lithia. Some experiments have been made by Mr. J. S. Haldane in the Westminster Palace sewer, which go to prove that micro-organisms were few whenever there was a regular current of air; that with little or no draught there was an increase of carbonic acid, and with that an increase of micro-organisms, but they were moulds rather than bacteria. But another very curious thing was found to exist—viz., that when the ventilation within the sewer was much improved, so that Co_2 was materially diminished, there was a considerable increase in the number of bacterial organisms, as if a diminution of oxidation allowed of the increase of germs.

Mr. Haldane examined the air in the Bristol sewers, which are not ventilated. He found that in those sewers the moulds exceeded the bacteria, while in the air of the streets the bacteria exceeded those of the mould.

Hesse has shown us that although the spores of the moulds are much larger than the bacteria they remain suspended in the air much longer than do the bacteria. Mr. Haldane concluded that it is to the presence of air from without that we owe the more prolific existence of bacteria in sewers, and and *vice versa*. His experiments led him to conclude that true sewer air contained fewer micro-organisms than the air of a street, or even the air of an ordinary living room. Our experimenter did find, however, that when the sewage was splashed about there was a large increase in the number of organisms observed, which is a great argument against the formation of large sewers. It is argued that there is much doubt as to the power of sewer air to disreminate typhoid germs independent of water supply. My own experience, arrived at by passing through three epidemics of that disease in Croydon, fully convinced me that when sewers, such as some of ours were in 1875, are loaded with typhoid excreta, the germs which are capable of reproducing the disease do get conveyed from sewers into human beings by aerial means, either directly by air or through the water supply. In those epidemics the very large number of domestic servants, especially kitchenmaids and cooks, who became victims to the disease, was one of their marked characteristics, the reason being that those persons went downstairs into the basement in the early morning before the house was thoroughly ventilated, and inhaled the sewer air that had collected in the kitchen during the night. Then

there was Dr. Buchanan's demonstration as to the reason why fever existed on one side of two or three streets which he specified, in which the water supply was the same, and the sewer the same. In one set of cases the air was admitted into the houses from the sewer; in the other it was not. It is clear, however, that

ORDINARY SEWER AIR CANNOT PRODUCE MISCHIFE

unless the organisms from particular forms of disease exist in the sewer. It becomes the bounden duty of the authorities to take care that no such organisms continue to live and multiply there, and that when cases of any infectious disease exist in a given locality they shall pay particular attention to the sewers in that locality, and prevent them from discharging disease germs into the streets from the open grids which are left for ventilating purposes. They will do this if they are only partially ventilated, and are sewers of deposit.

We are now in a position to answer the four questions which I have put forward.

1st. Do microbes exist in sewer air? No doubt they may. If sewers are properly laid, and there is no sewage deposit, no impediment to discharge allowed to take place, and no part of a given length allowed to have stagnant air in any part of it, there will be no disease germs.

Disease germs require time for development, and if excreta be hurried away to their proper destination, where they become *bonnes bouches* for the carnivorous plants which should be found on sewage farms, there is an end of their *rôle* as disease germs. But if the sewers are sewers of deposit some may settle on the pipes; they may fructify there, and there living, growing spores be carried away by the currents of air and then discharged, to the possible danger of the people. They are not, however, the necessary parts of a sewer system, but are the accidents of defect. I have not the least doubt myself that a stinking grating is not dangerous, from the circumstances I have mentioned. It is an undoubted fact that the year which produced a panic in the House of Commons, and by which the Metropolitan Board of Works was brought into being, was produced by the stinks from the bed of the Thames. It was the healthiest year that London had experienced for a long time, as far as enthetic disease is concerned, at least, if statistics prove anything, and yet the Thames smelt so badly that our senators could not carry on their work in the committee rooms of the House of Commons.

Stinking sewers should not be allowed to exist, but to my mind it is better to have the open grids in the streets than to convey the mischief, which is possible, into positions preventing our getting the knowledge that the sewers require to be scoured. Every line of sewer should be well scoured in the crown of its arch as well as at the bottom, and after the scouring thoroughly flushed by a body of water that fills its calibre completely. The flushing which I see going on in our town from a two or three-inch tube is all but useless for the purpose required, except where there is a stoppage, which produces a head of water and fills up the sewer.

Sewers of comparatively small size, in exactly straight sections, so that they may have the lamp test applied, and which sewers can be flushed by the sudden discharge of a large body of water at frequent intervals, when the temperature of the sewer rises above a certain point, will remove the colonies of disease germs. They do grow on the sides and invert of the arch of swers, as certainly as they may be made to grow in tubes containing pure solution of gelatine. If the ventilation is tardy, so as to allow of fructification, the colonies give off their spores, and these may possibly infect a passer-by, who happens to be infective, and upon whose mucous membrane the organism happens to fall. I say this is a possible contingency, but it will rarely happen. These germs are of two kinds: the one is a living, growing organism, which I may compare to the barley which has been made to sprout in preparation for malting. If this organism be planted on a mucous surface ready for its reception it may take root, reproduce its kind, and set up its own form of disease; but, like to the white corpuscles in human blood, exposure to pure air for a very short period indeed is fatal to them. The fact is made out in the operation called transfusion. If the blood in its passage from one person to another be exposed to the air for more than a small fraction of a second, the corpuscle dies, and the patient, though at first reviving, afterward succumbs to the mischief produced by the dead fibrine. If growing germs are exposed to a current of fresh air, free from ammonia and with its fair proportion of oxygen, in the sewers, the germs will be deprived of vitality before they escape into the open air. It is owing to this fact that the ventilation of sewers must be complete if such ventilation is to be safe. A partial ventilation does not provide for the death of the living, growing germ, and it is this living, growing germ which does the mischief; for the other form, the resting spore, will not rise from the watery bed. The growing germ is also destroyed by sulphuretted hydrogen and its binary compounds, the product of the decomposition of all albuminous matters. I say, then, that

WELL-VENTILATED SEWERS ARE SAFE;

they are doubly so if they are thoroughly and properly flushed. If they are not sewers of deposit they cannot produce sewer gas, and if they thoroughly stink, disease germs cannot live in them

so that in either case there is no danger; but there is a possible danger, when it is not discoverable by reason of smell, if those openings which give out offensive odors are occasionally free from the discharge of stinking matter, and some one who is not germ-proof stoops down at the opening. Children will be, may be, victims. If we bear in mind that in a pure atmosphere the life of the germ is momentary, all serious danger is at an end. I have said in a pure atmosphere. If the air is impure, if it contains alkaline gas in the form of ammonia rather than the nitrous or sulphurous form of gases, there is the possibility of a much longer life than is the case when the air is pure or has an acid reaction. It is to this fact that diseases spread in unventilated, dirty houses, and if it was not for the sulphurous acid which is formed in the London smoke-fogs it is most likely that the life history of disease germs would be made more manifest than it is when we have an atmosphere entirely without ozone for days together.

We may take it as true that living disease germs from sewer ventilators are possible factors, but they are rarely provided. If the sewers are only partially ventilated, with tendency to the formation of carbonic acid in excess, there is a mould formation rather than bacterial life, and moulds are not yet proved to be zymotic disease germs to human beings. They are comparatively benign; like to benign bacteria, they help to purify both air and water. and return the albuminoid or nitrogenous matters to their simple elements, ready for use by the vegetable world.

I cannot conceive benign organisms becoming malignant in the processes which take place in sewers unless the temperature be raised much beyond that which is ordinarily found in proper sewers with an abundant water supply. I mentioned, when speaking of sewer flushing, that this process must be frequent at certain times, when temperature is higher than usual. If at any time the temperature in this country should be continually high for a month or six weeks together, so that the temperature of the London water should be kept above 65 degrees for a month, London may prepare for a tremendous outbreak of typhoid in the succeeding autumn. It requires a continuously high temperature for probably a month to develop typhoid spores in the drinking water as at present manipulated at the filter works of the ompanies. That season will come some day with he usual result, "panic," and consequent loss. or the same reason, unless sewers have their temerature permanently raised for some time, there no danger from benign germs being replaced by alignant; but I believe that it is possible for the ntinuous discharge of hot water so to raise the nperature of a drain-pipe that it may be a hid- source of danger, and that such continuous harges of hot water from manufactories may be dangerous in badly-constructed sewers, though an excessive heat, such as is experienced on a sunny day, destroys bacteria; but if sewers are well and truly laid, if the pipes are smooth inside and have been properly jointed, if they flush clean, and are properly flushed at intervals, depending upon the temperature of the sewage, then there is no real danger from the admission of hot water into sewers.

I think I have dealt with the four points to which I have drawn attention, and I will conclude what I have to say on this subject, that the greatest danger from drains is not in the public sewer, but in the house connections and in the private drains laid by speculative builders. They are only occasionally used, they become all but dry at frequent intervals, and if they are not as clean as a back kitchen sink ought to be, they will, in spite of all precaution, occasionally produce sewer air. They must be ventilated even more perfectly than the public sewers, and so cut off from all direct communication with the house that it shall be absolutely impossible for any of the products of decomposition, if they arise, to find their way inside the dwelling and carry living, growing germs with them. If these arrangements are carried into effect, those living in such houses may defy disease germs and live in perfect safety from their attacks, and, in the words of the Psalmist, we may say—(1) Thou shalt not be afraid of any terror by night, nor for the arrow that flieth by day; for the pestilence that walketh in darkness, nor for the sickness which destroyeth in the noonday. (2) A thousand shall fall beside thee, and ten thousand at thy right hand, but it shall not come nigh thee. —*The Sanitarian.*

SOME GENERAL CONSIDERATIONS IN THE TREATMENT OF EPILEPSY.

The treatment of a disease may only be considered entirely rational when it rests upon the firm foundation of pathological knowledge. What then are we to do in epilepsy, the cause of which so authoritative a writer as Hughlings Jackson says has not yet been discovered, a disease which presents no essential morbid anatomy?

Probably for no one disease, have more remedies and methods of treatment been lauded, which in itself emphatically expresses the poverty of therapeutics. The National Dispensatory, in its second edition, lists sixty-four drugs under the heading of Epilepsy. In the older authors as many as ninety medicinal substances are mentioned. Ranny, in his recent work, details a score of pharmaceutical preparations. To these must be added dietetic, hygienic, moral and electrical measures. The large majority of such means have been employed as the result of the shallowest

empiricism or something less; many have been used and recommended from erroneous ideas of the nature of the disease. An enumeration of a few comparatively recent opinions even, as to its morbid anatomy will make this plain. Schroeder von der Kolk held that the vessels of the posterior half of the medulla were unnaturally dilated. Kroon insisted upon the asymmetry of the olivary bodies. Solbrig claimed that constriction of the spinal canal and secondary atrophy of the medulla was the underlying condition. Lelut, Meynert and others maintained that sclerosis of the cornu ammonis was pathognomonic. Landois saw the ætiology in venous hyperæmia of the brain and spinal cord. Cooper attributed the disease to compression of the carotids. Nothnagel described an irritation of the "convulsive centre" in the region of the pons, and so on endlessly.

As far as our knowledge of the anatomical character of epilepsy now extends, no primary pathognomonic changes are known, and Jackson holds to the idea that the disability of the nervous apparatus is the result of arterial disease, thus being a secondary condition only. The reigning hypothesis from a quasi-physiological standpoint is that certain areas, cortical or ganglionic in the brain are in an over-sensitive condition, overstocked, so to speak, with nervous energy and ready to discharge their force suddenly or irregularly under a given provocation.

It may perhaps be accepted that epilepsy only appears in those who are predisposed, and then only upon the occasion of some exciting cause or condition. Heredity explains the predisposition in a little more than one-third of the cases, the ancestors having presented epilepsy or allied neuroses. It is not difficult to understand in many instances where no neurotic family history is discoverable that the marriage of people on the border of nerve instability will, by the combination of their nervous shortcomings, liberally endow their offspring with conditions suitable for the development of this grave disease. In many instances no antecedent information is obtainable, but it is not necessary to seek the predisposition always in heredity. Circumstances, habits, vices, and conditions personal to the patient may so deteriorate his powers of resistance and his nervous mechanism, that conditions favorable to the discharging lesions of epilepsy are developed *ab initio*. Unless a predisposition is conceded, how is to be understood the fact, that of all the numerous head injuries of daily occurrence so very few are followed by epilepsy? that in some individuals the merest traumatism is the starting point, that in others a tænia may determine typical epileptic attacks which cease upon its expulsion?

Of inciting causes, Gowers, in a series of fourteen hundred and fifty cases, mentions exposure to the sun, ascarides, acute diseases, falls, use of forceps, difficult labor, teething, fright, anxiety, excitement, traumatism, toxæmic influences, sexual irregularities and abuses, parturition, syphilis, heart diseases, chorea and some others.

Recently much attention has been given to the eye. Dr. Stevens, in a consecutive series of one hundred cases, invariably found refractive errors. Ranny lays particular stress upon ocular strain as an inciting cause, and reports marvelous cures in chronic and even insane epileptics as the result of operations to rectify the lack of balance in the ocular muscles and by the application of lenses, to overcome the refractive difficulties. Oculists everywhere are curing migraine by prescribing glasses, and the relationship of hemicrania with epilepsy has been recognized for many years. The proposition is advanced in this connection, and may apply elsewhere, that the nervous energy required to maintain the visual apparatus in equilibrium, constitutes a drain upon the sum total of nerve force, leaving the unstable areas unguarded and peculiarly susceptible to the irritation which the eye strain at the same time furnishes. The correction, therefore, of the eye difficulty restores the nervous balance and removes the exciting cause of the attacks if not of the disease. Examination of the fundus of the eye in one thousand cases by Gowers did not discover more abnormalities than in healthy individuals. The habitually dilated pupil of epileptics appears to make them more than usually susceptible to bright lights, and cases are recalled where going quickly from light to darkness, or the reverse, would determine a seizure.

In facing then the subject of treatment, we have these conditions before us. First, an unstable cerebral area with tendency to unequal and uncontrolled discharges of nerve force. Second, the almost certain existence of a condition constituting a constant or occasional source of irritation, and acting as a discharger of the nerve force held in uncertain equilibrium in the cerebrum.

It is to the correction or removal of this second state that intelligent efforts must be directed, or failing to determine this, we are thrown back upon the necessity of trying to blunt the susceptibility of the cerebrum in placing chemical restraint upon the nerve cells, by such means as the bromides, often at the expense of the activity of all cerebral functions, in the hopes that a better habit may be engendered, or at least some of the unpleasant manifestations of the disease favorably modified. Yet it is the observation of many, if not all, who treat considerable numbers of epileptics that they are brighter intellectually when not taking the bromides, though their convulsions may be very much more frequent, and that when these are repressed for a long time by nerve sedatives there finally occurs a terrific explosion. There is a tendency to pronounce against the continuous use

of the bromides or any other drug. Allen McLane Hamilton says: "In our management of epilepsy we are to avoid everything that smacks of routine treatment." Ranny remarks: "Personally I am inclined to believe that the apparent benefit derived from the use of the bromides is more than counterbalanced in most cases by their disastrous effects upon the nervous system." Yet competent writers assert that good effects from the bromides are only to be expected when anæsthesia of the pharynx, acne, and in a word, bromism is produced and maintained for several years.

To determine the irritant condition is as great a problem often, as falls to the lot of a physician. Cases have been cured by the correction of squint, astigmatism, ametropia; by the removal of an ingrowing nail; by the expulsion of a few round worms, a tænia, or fæcal accumulation, or foreign body in the intestines; by the excision of a slight cicatrix including nerve filaments; by the removal of a spiculum of bone producing irritation of the meninges, even of a slight roughness of the inner table of the skull; by the excision of cerebral tumors; by the removal of biliary and urinary calculi; by the extraction of a carious tooth; by the correction of vicious habits and abnormal conditions of the genito-urinary tract. On the other hand, cases permanently and definitely cured by drugs addressed to the nerve cells are so rare that many of large experience have never seen one

Where an inherited or acquired constitutional dyscrasia exists, its appropriate treatment is a most important indication. The English authors lay much stress upon rickets as a casual factor, and the same is true of the German writers.

The dietetic management is of the very first importance. Usually epileptics are inclined to gormandize and become plethoric. As a rule, all meats should be denied them, and even soups, butter and eggs interdicted in some cases. A vegetarian diet with milk has seemed to give the best results. It is necessary, however, in this regard to individualize, the object in view being the attainment of perfect physical health, and cases are encountered where fats, cod-liver oil and albuminoids are indicated. The processes of digestion should be scrupulously watched, every pains being taken to secure regularity in all the functions of the alimentary tract. Frequent bathing, suitable clothing and hygenic precautions which tend to equalize the circulation are of great value; but in regard to bathing a word of warning is needed, as either a hot or cold bath by its effect upon the circulation may bring on a seizure. As it has been determined that of severe attacks the largest number occurring at any one time, take place in the early morning hours; early rising is to be deprecated, and the patient should feel himself thoroughly aroused before leaving the bed. Violent exertions or emotions are to be avoided, but suitable out-door employment or exercise with moderate mental occupation and recreation are of importance. In a word, all those conditions should be provided which favor a healthful existence.

An aura will sometimes direct attention to local measures. When it commences in an extremity an encircling blister, or even a rubber band sometimes, may be sufficient to postpone epileptic attacks. A case is recalled in which a young man having from three to six seizures a day with occasional maniacal outbursts, presented an aura, always commencing near the toes. A blister about each ankle without the administration of any drug whatever, gave complete freedom from the attacks for seventeen days, when the loss of cuticle having been repaired in part, the aura and fits recurred, to be again controlled by a repetition of the blister. This furnished an opportunity for dietetic and non-medical measures by which he was secured immunity from convulsions for over a year, recurring irritability being the only remaining nervous symptom, and this was controlled whenever it appeared, by a few doses of bromide.

Surgical interference is called for by a great variety of conditions, and often results brilliantly. A reasonable connection, however, between the particular condition in question and the epilepsy should be made out. The practice of trephining all epileptics has deservedly fallen into disrepute.

While single convulsions almost never terminate fatally and leave no visible trace of mental impairment directly resulting, yet the absolute tendency of repeated attacks is toward mania and dementia. Anything which will enable a patient to avoid a single fit is so much gained for him, providing it is not at the expense of his physical or nervous forces. Patients who have a warning of their convulsions are able to abort them by the inhalation of a few minims of nitrite of amyl. A sternutatory sometimes has the same effect. With others the recumbent position occasionally affords relief.

In spite, however, of every effort to discover the irritant condition, many cases are found in which diagnostic measures now at our command, fail to bring to light this important factor. We are then brought to a consideration of therapeutical means addressed to the nervous apparatus directly.

Dr. Rockwell, of New York, has reported some benefits derived from central galvanism and general faradization combined with medicinal treatment. It is doubtful that the use of electricity acts directly to the betterment of the discharging lesion. Probably its value is in the general tonic effect it produces, and the improved physical state it encourages. It has seemed to me in some cases to have done good, and there is claimed for it that it increases the efficacy of the bromides and diminishes their unpleasant effects.

Of all the medicinal remedies for epilepsy the bromides have enjoyed the greatest reputation, and have deservedly many ardent advocates. The potassium salt is perhaps the most efficacious, though idiosyncracies may determine the choice of the bromide of sodium, lithium zinc or iron When its use is undertaken, a course of treatment extending over several years must be confronted, and the patient thoroughly interested in carrying it out faithfully. I have in mind a patient cured for over three years on an average daily dose of sixty grains. During the two latter years he had no fit, yet upon the gradual withdrawal of the drug the convulsions recurred and he finally died in a condition of status. Jackson recommends the immediate exhibition of large doses until distinct symptoms of bromism appear, when the effect can be maintained by a reduced quantity, and this course is sometimes preferable to gradually increasing doses with its tendency to the establishment of a tolerance for the medicament. The bromide treatment in the estimation of the writer should be a last resort. Its disadvantages and lack of specificity have been already indicated.

Of belladonna, hyoscyamus, curara, Indian hemp, digitalis, nitro-glycerine, strychnine and arsenic one must speak with great reserve. Their potency to bring about a cure when directed to the so-called idiopathic state is very doubtful, but they may be incidentally indicated as adjuvants.

In regard to the management of individual features of the disease, of an attack or of status it is not here the place to speak. The gloomy prospect in store for epileptics if not relieved, the long course of treatment ordinarily required, and its uncertainty, the difficulty in securing intelligent and willing co-operation on the part of patient and friends, renders the physician's task inthis disease one of the most arduous in the whole range of medicine.

To summarize briefly :

1. Epilepsy has yet no specific treatment.
2. Antispasmodics merely combat a prominent symptom.
3. Irritant causal factors, may be often discovered, and a cure accomplished by their removal.
4. Hygienic, dietetic and constitutional measures are of great importance.
5. The bromide treatment is a *dernier ressort.*—Dr. Church, in *Western Med. Rep.*

FRACTURES OF THE NECK OF THE FEMUR.

Senn contributes a characteristically able article (*Jour. of the Am. Med. Assoc.*) upon fractures of the neck of the femur. Six years ago he published over fifty cases in which bony union after intra-capsular fracture had taken place, and practically demonstrated the fact that non-union was due more to inefficient treatment, to imperfect immobilization, than to any inherent peculiarity in fractures of this region. By means of experiments upon cats he showed that intra-capsular fractures treated by the ordinary expectant method, or by means of plaster-of-Paris casts, showed no evidences of bony union, while in those in which the fragments were pinned together by means of bone pegs, bony union, or union by means of an exceedingly short ligament, without any displacement of the fragments, was obtained. The fact that in impacted fractures satisfactory results are usual, is an additional proof that failure in these fractures is due to imperfect fixation. A brief anatomical study readily shows that the old method of extension and sand-bags neither approximates the fractures nor keeps them in fixed position.

The diagnosis of this fracture, when complete, is comparatively easy ; if partial or impacted, however, it may become exceedingly difficult. The three cardinal symptoms to be considered are : the position of the trochanter major, shortening, and eversion. In all fractures, except the partial, the upper border of the trochanter major will be found above the Roser-Nélaton line (a line drawn from the anterior superior spinous process of the ilium to the tuberosity of the ischium).

The examination of the patient never requires the administration of ether, nor should the surgeon endeavor to elicit crepitus or preternatural mobility. The clothing having been removed as far as the chest, and the patient having been placed upon a hard, smooth, unyielding surface, careful measurements, aided by inspection and palpation, are usually sufficient to determine accurately the nature of the injury The treatment advocated in fractures through any portion of the femoral neck consists in the fulfilment of two principal indications : (1) Immediate reduction. (2) Permanent fixation.

In impacted fractures, the second indication alone is regarded, no attempt being made to correct any of the displacements.

Since, in all intra-capsular fractures, union is effected entirely by the production of intermediate callus between the broken surfaces, no external or provisional callus being formed, the mechanical support upon which coaptation depends must be retained much longer than would be necessary in other localities. In no case should the retention apparatus be removed in less than eighty or one hundred days.

Permanent fixation of an impacted fracture in the position in which it has been placed by the accident, is necessary for the following reasons :

1. It prevents disengagement of the fragments.
2. It obviates secondary shortening and eversion during the stage of interstitial absorption which attends inflammatory osteoporosis.

3. By keeping the injured parts at rest, it serves as a prophylactic measure against the accession of arthritis and para-arthritis.

4. It enables the patient to leave the bed any time after the dressing has been applied, and thus guards against decubitus, hypostatic pneumonia, and other affections incident to prolonged confinement to bed.

The advantages arising from immediate reduction and permanent fixation in fractures of the neck of the femur are the following :

(*a*) The untorn portions of the joint structures are replaced at once into their normal relations ; a procedure which cannot fail to influence favorably the circulation in vessels which may have escaped injury.

(*b*) The sharp and irregular margins of the broken surfaces act as irritants to the surrounding soft tissues ; immediate reduction, by placing the fractured surfaces at once into mutual coaptation, acts as a preventive agent against the supervention of undue inflammation in and around the hip joint.

(*c*) With coaptation the process of repair is initiated at once ; the blood and exudation material between the fragments act as a temporary cement substance, and, at the same time, serve a useful purpose in re-establishing the interrupted circulation.

(*d*) Perfect reduction and permanent fixation prevent muscular spasm and diminish pain.

Senn originally proposed immobilization by means of a steel pin regulated by a screw passing through the centre of a curved steel bar incorporated in the plaster-of-Paris splint over the fenestrum. This pin was so arranged that its point would, by penetrating the bone, procure immobility of both fragments by lateral pressure. In some cases transfixion of both fragments by an ivory or bone nail was advocated. Clinical experience has since proven that the same object can be accomplished by well-regulated lateral pressure in the direction of the axis of the femoral neck, combined with perfect fixation of the lower fragment upon the pelvis.

The method of treatment is as follows : The fractured limb is incased in a plaster-of-Paris dressing as far as the middle of the thigh, the patient is then lifted out of bed and, supported on either side, stands with the sound leg upon a stool about two feet in height. An assistant takes charge of the injured limb and either holds it immovable in pacted fractures, or makes the requisite amount extension if there is no impaction. In apply- the plaster-of-Paris bandages over the seat of cture, a fenestrum large enough for the appli- ion of the lateral compress is left open over the at trochanter. Perfect immobility is secured including in the plaster dressing the fractured b, the pelvis, the opposite limb down to the and the trunk as far as the cartilage of the eighth rib. The splint, which consists of a steel bar provided at the ends with lateral flanges and bowed out in the middle, is incorporated in the plaster dressing with the bowed portion directly over the trochanter major. This part is provided with a set screw which drives a stiff, well-cushioned pad so that pressure is made in the axis of the femoral neck. By this means a condition resembling impaction obtains in non-impacted fractures. In about three months the dressing is removed, but the patient is not allowed to put his weight upon the injured leg for one to three months longer.

Seven cases are reported in which the results of this treatment were gratifying in the extreme. The patients recovered almost complete functional activity in each instance.

In extreme obesity or debility, in patients suffering from concomitant fatal maladies, and in certain cases of fracture of the femoral neck, the treatment is not applicable, but in all cases where there is a reasonable hope that bony union may be obtained by fixation, it should be recommended.

Finally, as a result of his experimental and clinical study of the subject, Senn draws the following conclusions :

1. From a scientific, prognostic, and practical standpoint it is not necessary to make a distinction between intra and extra-capsular fractures of the neck of the femur.

2. An impacted fracture of the neck of the femur will unite by bony union, provided the impaction is not disturbed and is maintained by appropriate treatment for a sufficient length of time for the fragments to become united by callus.

3. Impacted fractures of the neck of the femur should be treated by a fixation dressing consisting of a plaster-of-Paris case, including the fractured limb, the pelvis, and the opposite limb as far as the knee, in which a splint should be incorporated by which lateral pressure can be secured in the direction of the axis of the broken femoral neck.

4. Unimpacted fractures of the neck of the femur, both intra- and extra-capsular, should be treated by immediate reduction and permanent fixation, so as to place the fragments in the same favorable condition during the process of repair as in impacted fractures.

5. Reduction is effected most readily by auto-extension and traction upon the fractured limb with the patient in the erect position, resting his weight upon the sound limb.

6. The fixation dressing should not be removed and the lateral pressure should not be discontinued for from ten to twelve weeks, the shortest space of time required for bony union to take place.

7. Patients who have sustained a fracture of the neck of the femur should not be allowed to use the fractured limb earlier than four to six

months after the accident, for fear of establishing a pseudo-arthrosis at the seat of fracture.

8. The functional result is greatly improved by passive motion, massage, and the use of the faradic current.—*Am. Jour. of the Med. Sci.*

THE TREATMENT OF THE ACUTE STAGE OF ECZEMA.

The literature of eczema is pretty extensive, and it can hardly be considered by the most astute observer, or the most exacting critic, that its treatment has not received an adequate share of attention. It must indeed be conceded that more than ordinary attention has been bestowed upon the subject. Numerous remedies and modes of treatment have from time to time been suggested for the benefit of the sufferers from this troublesome complaint, and although I have nothing very new or original to communicate, I have suggestions to make and remedies to propose which, in combination, will speedily arrest the inflammatory stage of the disease, and put an end to perhaps months or years of future suffering. Had the remedies proposed been less numerous, confusion in their selection and application would have been diminished in like proportion. A good deal has to be laid to the charge of those whose mission it is to add to our accumulating stock of remedies. What the busy practitioner of medicine requiries is not a multiplication of remedies, many of which are of equal value, but a judicious selection ready to hand on which he may place reliance, and with which he may cure his patients in the shortest possible time. What applies to remedies equally applies to books. A long farrago of remedies is more often than not laid down in the chapter on treatment for the practitioner to select from. Instead of the best only being pointed out for him, he his left to grope about in the dark, and select as best he can. I have at my elbow an otherwise excellent volume on skin diseases, where no less than forty-nine drugs are mentioned *seriatim* for external use in eczema, without note or comment as to their relative value. This is not at all the sort of book a medical man requires; it is of no practical utility to him. He scans its pages in vain in preparation for the morrow's rounds, or for the benefit of patients expected in the consulting-room in a few minutes' time. He is obliged to lay it aside in despair of gleaning anything of practical advantage from its pages. We want to make ourselves and our books as practical as possible. The most suitable prescription to our patient at the first interview is urgently demanded. That forty-nine remedies may be indicated in a particular disease we may with a stretch of imagination concede; but that a particular patient will present himself at our consulting-room forty-nine times to be experimented on with a fresh prescription every time is rather doubtful.

In the treatment of the acute stage of eczema two essentials must be reckoned with before we proceed to tackle the disease itself. The first of these is, that the patient must be instructed not to wash the eczematous parts, and this advice he must religiously observe. He will probably reply, "But I must wash sometimes." "Wash not at all," is the first commandment in eczema. He must neither wash with, nor yet without, soap, nor with the usual adjuncts of bran steeped in hot water, oatmeal, milk and water, butter-milk, whey, sour milk, or rain water, or any other of the usual washes; all of these are mistakes that seriously hamper and delay curative treatment. That persistent washing predisposes to eczema by drying the skin, and depriving it of the unctuous secretions which impart to it suppleness and softness, qualities on with the natural beauty of the complexion so largely depends, there cannot be a doubt. For the same reason and in the same manner, although it is not generally known, frequent washing with soap and water is disastrous to the growth of hair, it changes its natural color to a lighter hue, the natural gloss is lost, the hair becomes dry prematurely grey, and early baldness is favored. This process of destruction is materially hastened by washing the head with warm or hot water and soap during cold weather. The head and beard should be dressed and kept clean by combing and brushing, a process all-sufficient for purposes of cleanliness, and the rational method for preserving a fine head of hair.

In eczema of the head and face the more essential parts to wash, such as the corners of the eyes and angles of the mouth, may be touched lightly with a small piece of soft sponge, made damp with cold water, and immediately dabbed dry. Warm and hot water should be discarded in the neighborhood of the eczematous skin. A patient suffering from eczema of the head and face only may of course sponge and wash his body with warm water as frequently as necessary. Coffee, strong tea, and alcoholic drinks should be forbidden.

The second essential is that the bowels be kept well open. In the case of children, grey powder, rhubarb, and bicarbonate of sodium, a grain of each, taken as required every second or third night, will answer every purpose; or grey powder and magnesia will do equally well. In adults saline medicines hold the first rank. The following is a useful combination:

R.—Magnesii sulphatis, . . . ℥ vj.
Sodii bicarbonatis, . . . ℥ j.
Infusum gentianæ co., . ad ℥ vj.

Sig.—Take a sixth part three times a day before meals.

I do not hesitate to say that the sulphate of magnesium is far and away the best of all purgative medicines in most other diseases as well as in eczema—the best because the mildest, the least irritating, one of the least injurious, and certainly one of the most effectual; but it must be taken at the proper time and in the proper quantity. The proper time is an hour before meals—preferably in the morning before breakfast, although it may be taken beforeany other meal with nearly equal benefit. The proper quantity is three drachms, dissolved in three parts of a tumbler of cold water or soda water. Hot water does not materially help its action, and it makes the drug more nauseous. Three drachms of sulphate of magnesium dissolved in an ounce of chloroform water, followed by a cup of tea or beef-tea, can be swallowed almost without taste or inconvenience. A four-or-five-grain blue pill taken at night, and the same draught next morning, has its advantages; or, what is perhaps better still where free purgation is desired, the following pill at bed-time, and the draught in the morning:—

℞.—Extracti colocynthidis co. . gr. iij.
Pilulæ hydrargyri, . . . gr. j.
Extracti hyoscyami, . . . gr. j.
Ft. pil.

Where there is torpidity of the liver, a combination of cascara with nux vomica is equal, if not superior, to any other:

℞.—Extracti cascaræsagradæ liquidi, ʒ iijss.
Tincturæ nucis vomicæ, . . . ʒ j.
Glycerini, ... ʒ iij.
Infusum gentianæ co., . . ad ℥ viij.

Sig.—Take one ounce every evening directly before dinner, or morning and evening if required.

Medicines such as arsenic and iodide of potassium given internally I have found disappointing, and of very little use. Of course gouty eczema must be suitably treated.

The great desideratum is the appropriate external treatment. I have been in the habit of prescribing an ointment which in most cases pretty nearly approaches the character of a specific:

℞.—Bismuthi subnitratis, . . . ʒ iv.
Zinci oxidi, ... ʒ j.
Acidi carbolici liquidi, . . . ʒ ss.
Vaselini albi, ... ℥ ij.

't. ung.

ometimes I vary the prescription into this m:

.—Bismuthi subnitratis, . . . ʒ ij.
Zinci Oxidi, ... ʒ ss.
Glycerine (Price's), ... ʒ jss.
Acidi carbolici liquidi, . . ♏ xx.
Vaselini albi, ... ʒ vj.

ung.

The latter ointment mixes into a beautiful enamel-like cream, which is cooling, and acts as a balm to the irritable skin.

When constant tingling and irritation disturb the patient's rest at night, I have found this lotion invaluable:

℞.—Bismuthi subnitratis, . . . ʒ j.
Glycerine, (Price's), ... ʒ iv.
Acidi carbolici liquidi, . . . ♏ xij.
Aquam rosæ, ... ad ℥ j.

Sig.—Shake up and apply with a camel's hair pencil.

During the day, when business has to be attended to, and the ointment cannot be applied, a powder will be found useful.

℞.—Cimolite.
Bismuthi subnitratis.
Zinci oxidi, āā partes æquales.
Fiat pulvis.

In more chronic cases the famous *Unguentum Metallorum* still holds its own. It consists of:

Unguenti Zinci.
" Plumbi acetatis.
" Hydrargyri Nitratis, āā partes æquales.
Misce.

This ointment I occasionally vary by substituting white precipitate for the nitrate of mercury ointment.—D. MACKINTOSH, M.D., LONDON, *Practitioner*.

A CLINICAL NOTE ON THE USE OF CREOSOTE IN PHTHISIS.

My experience concerns sixteen cases treated at the Roosevelt Hospital and two in private practice. For various reasons the latter two cannot be considered as bearing on the efficiency of the treatment. Of these 16 cases, 11 presented consolidation, two cavities and three both, *i. e.*, consolidation at one apex and a cavity at the other—advanced cases. Of the 16 there were eight of each sex. The average age was twenty-five, the youngest thirteen and the oldest forty-six. The average duration of treatment was 78 days, the shortest 40, and the longest 141 days. The average duration of the disease, as ascertained by the symptomatic history given on application for treatment, was 28 weeks, the longest 72 and the shortest two weeks. In one case the patient felt perfectly well till the occasion of his taking cold, when he immediately applied for treatment and was found to have commencing consolidation at the left apex. Another patient had had lung trouble several years, and this, too, is not of the above number. The average is reckoned on 14 cases. In five cases there was a family history of phthisis. In eight the temperature was

normal; in all the others more or less pyrexia. Night-sweats were present in 11. There was a history of distinct loss of weight in 12. In 12 there was hæmoptysis. In all, if the cough was at all severe, a simple cough medicine was used of antimony, ammonium muriate, and small doses of morphine in differing combinations. Creosote was given only by the mouth. The formula I have followed was as follows:

℞.—Creosote,
Tinct. capsici, ... āā ℥ iij.
Mucilag. acaciæ, ... ℥ ss.
Water, ... ad ℥ iv.

M. S.—Dose, one teaspoonful diluted in water after meals.

In 11 there was unconditionally no gastro-enteric disturbance from the remedy.

Cough lessened in	8,	cured	in 2,	unaffected	in	3 =	13
Fever " "	4,	" "	1,	"	"	3 =	8
Sweating " "	5,	" "	1,	"	"	4 =	10
Weight lost	4,	gained	4,	"	"	8 =	16

To summarize: seven cases were apparently not in the least improved, seven were distinctly benefited, and two I regard as cured. At the time of their last examination there was not the least sign or symptom of any active process going on in the lung. They felt as well as ever. Were able to do their usual work. One had been under observation fourteen weeks, and the other twenty weeks.

In collating these cases I have decided, in every doubtful point, against rather than for creosote. I am well aware that these observations are defective as regards the influence on the bacilli. When they were begun it was with no intention of presenting them in this public manner, and examinations of the sputa were not made. I feel conscientious, however, about the diagnosis, and I am bound to say that creosote has done more in my hands than any other remedy I have ever used. Of all the cases of phthisis I had seen, up to the time of beginning creosote, in a hospital experience of eighteen months and out patient service of four years, I had never seen but one case cured on the usual treatment of tonics, cough-mixtures, and cod-liver oil.

Concerning the *rationale* of the action of creosote, I believe that it is a direct antiseptic and disinfectant. I do not know whether it is a specific against the bacillus. I think not. I believe, however, that it is not irrational to expect that such an one may be found. I think, too, that the sclerotic change which results on the arrest of tubercular invasion is not so much the specific effect of creosote as nature's process, set up when the virulence of the poison is checked.—James E. Newcomb, M. D., *in Med. Record.*

MEDICAL NOTES.

In *fracture of the sacrum or coccyx*, pack the rectum or introduce a colpeurynter. (Dr. Mears.)

In convalescence from *endocarditis*, Prof. Da Costa insists on perfect rest in bed, and also directs the administration of iodide of potash.

In the treatment of *acute gastritis*, Prof. Da Costa directs the following treatment: Keep the stomach absolutely at rest, not giving anything but iced liquids; nourish by the bowel; give hypodermics of morphia over the stomach; calomel in ⅛ gr. doses every few hours. Bismuth in decided doses.

Where a *chancre* becomes phagedenic cauterize the surface with carbolic acid, acid nitrate mercury, or

℞. Hydrag. chloridi corrosiv., gr. xv
Aquæ destillat., f ℥ j. M.

In the treatment of *chronic rhinitis* (hypertrophic), Dr. Sajous recommends applications of chromic acid to the enlarged sinuses, the acid being applied on a copper probe and held in the flame of an alcohol lamp till it changes color, previous to application.

In the treatment of *constipation*, the diet should be easily digested, but some articles should be given which mechanically aid defecation, as oatmeal, dried apples and peaches, and brown bread. Belladonna and nux vomica are the two pre-eminent remedies. Where remedies fail faradization of the abdomen is good treatment.—(Prof. Da Costa.)

For a case of *posterior spinal sclerosis*, of four years' duration, with severe headache, Prof. Da Costa directed argenti nitras ¼ gr. t. d., and for the headache the following:—

℞. Aconitinæ, ... gr. j
Lanolin, ... ℥j. M.
Sig.—Rub in a very small quantity at night.

For a man with *progressive muscular atrophy*, at the clinic, Prof. Da Costa directed avoidance of muscular exertion; gr. ⅓ oxide of silver t. d., and the following:—

℞. Liquor, potassii arsenitis, . gtt. j
Olei morrhuæ, ... f ℥iv. M.
Sig.—t. d.

In a case of *singultus* (hiccough) of long standing, attacks of which would last 112 days without intermission, Prof. Da Costa ordered the following prescription, which arrested the spasms in a short time:—

℞. Chloral hydrat. . . . . gr. v.
Sodii bromid. . . . . gr. x.
Tinct. belladonnæ, . . . gtt. iij
Aq. destil., q. s. ad . . f ℥ j. M.
Sig.—Every 4 hours.—*Coll. and Clin. Rec.*

AN IMPROVED URETHROTOME.

Although the Otis urethrotome is recognized as possibly the best instrument presented to the profession for severing strictures of large calibre, it has, in my experience, three faults: First, that after the knife or blade is drawn forward and made to cut the stricture, it has to be pushed back; second, it must be readjusted for each stricture after the first is cut; and, third, owing to the fact that it opens on the principle of a parallel ruler, the adjustment is slightly altered after it is opened from what it was when first set for the stricture.

The first objection is the most serious one. Although it is intended, when the blade is pushed back, that it shall traverse the same line as was made by the forward cut, in practice it does not do so, but goes back along a *new* line; for the loose character of the tissues of the penis makes this unintentional cut unavoidable, and, as the distal end of the blade is somewhat dull, it makes in addition the cut a lacerated one. The second objection is not such a serious one, but the readjustment takes time and necessitates needless and hence injurious manipulation of the urethra. The third objection is a trivial one—but an objection, notwithstanding.

With my improvement, which is here displayed, these objections are all overcome. The rod A slides to and fro in the slot in the upper bar of the instrument. The blade B is slid forward on top of this rod, and when the instrument is closed and ready for introduction into the urethra, the blade is beyond the end of the rod, down in the slot, and out of the way. The urethrotome is then introduced to the bottom of the penile urethra—to the bulb—and opened, regardless of the location of the stricture or strictures. The seat of strictures having been previously located, the rod A is drawn forward until its extremity is at the point of deepest stricture, and fastened in place with the screw C; then the blade B is drawn forward, and when it arrives at the extremity of the rod A, it rides up on this and cuts the stricture The rod is now released and drawn forward to the seat of the next stricture, and again fixed with the thumb screw C. When the rod is drawn forward the blade always drops into the slot and is out of the way, so that it can be drawn forward, and when it arrives at the rod it rides up on it and cuts the next stricture. When there are more than two strictures, the same process is gone through with until all strictures are cut—always cutting the deepest first.

It is not necessary to have any markings on the rod to indicate where the strictures are, for they can be located for the blade by deducting the distance from the meatus to the strictures from the length of the rod; *e. g.*, if a stricture is at five inches, the rod being eleven inches, six inches of the rod is left outside of the meatus, and when the blade is drawn forward it rises exactly where we want it to—at five inches.

The improved instrument has another advantage over the original Otis—when the blade and rod are removed it is easier cleaned.

When introdueing the rod or blade into the instrument, if the thumb is placed at the point D, and a little pressure made, we utilize a knack that will facilitate materially the ease with which they slide in.

Having had some experience with the instrument, I find it works admirably.

To know that the blade has dropped into the slot, it is only necessary to draw the proximal end of the rod one inch beyond the same end of the knife.—J. D. Thomas, M D., in *Med. Rec.*

THE MIASMATIC THEORY OF ACUTE RHEUMATISM.—To most practitioners acute rheumatism must appear essentially a personal or constitutional ailment, occurring most readily under certain unfavorable conditions, such as fatigue, exposure, depression, with wet or cold weather. There is a disposition, however, among some physicians, to regard it as dependent essentially on miasmatic conditions. One of the latest expositions of this view is to be found in a paper read before the German Medical Society of New York, by Dr. Leonard Weber, and contained in the *New York Medical Record* of Aug. 31st. Dr. Weber considers it nearly proved by the labors of Immermann, Edlefsen, Friedländer, and their pupils, that what he calls inflammatory rheumatism, and what is generally termed acute rheumatism, is not produced by taking cold—*i.e.*, refrigeration of the heated surface of the body; but that it belongs to the class of miasmatic infectious diseases assuming an epidemic-like character at certain times, in so far as we are apt to see a larger number of cases when there is decreasing rain and moisture, while with an increase of the same the number of cases is diminished. Among other points he considers as nearly proved, that rheumatism is also a house disease, the subsoil of houses in certain locations being infiltrated with the virus, which, after prolonged dryness, may be set free by the air currents carried into the apart-

ments. In masked forms of rheumatism there may be an absence of one or other of the main symptoms and of the polyarthritis. Neuralgia of the trigeminal, sciatic, spinal accessory, or other nerves, with slight febrile movement, may be of a rheumatic nature, and yield to alkaline and salicylate treatment after other remedies have failed. Dr. Weber says that his records show that the greater number of his cases of polyarthritis rheumatica occurred in February and March, and again in the hot and dry summer months. We do not commit ourselves to the theory of the miasmatic or external origin of acute rheumatism. By the way, Dr. Weber does scant justice to our own countryman, Dr. Maclagan, who must be chiefly credited with this theory, which, indeed, led him to the use of salicin. We incline strongly to the personal and constitutional theory of its origin. But it is well to keep all well-argued theories in view. It is satisfactory to note that Dr. Weber regards the salicylate of soda, which he gives generally with the bicarbonate, as standing in the foremost rank of valuable drugs with which modern chemistry has presented us.—*Lancet.*

THE PROGNOSIS OF ALBUMINURIA.—Dr. Johnson, in an address on the subject of albuminuria, before the British Medical Association, advanced the following propositions:

1. The presence of the albumen in the urine, though small in amount and occasionally intermittent, is always pathological.

2. The practice of testing the urine in all cases of ailments, even the most trivial,—the importance of which for years he has insisted upon,—has led to the detection of albuminuria in many youths and adolescents, who are especially liable to be exposed to the commonest of exciting causes, namely: cold and wet and over-fatigue, and who have not lived long enough for the ultimate evil results of a neglected albuminuria to become developed.

3. The albuminuria, whether intermittent or persistent, of persons apparently in good health has no such special features as to require it to be designated by such misleading terms as "physiological," "functional," "cyclical," and "the albuminuria of adolescents." The last term is especially inappropriate, since the condition is of most common occurrence in both sexes and at all periods of life, from childhood to extreme old age.

4. In almost every instance these cases of albuminuria may, by a careful inquiry, be traced back to some recognized exciting cause.

5. Nearly all cases of acute nephritis pass through the stage of intermittent albuminuria, in their progress towards convalescence; and, on the other hand, the majority of cases of intermittent albuminuria may be traced back to a more or less remote attack of acute nephritis.

6. While, on the other hand, intermittent albuminuria—even though it may have existed for years—may be looked upon as a curable condition if only its exciting causes can be ascertained, avoided and counteracted by suitable dietetic, medicinal and hygienic means; on the other hand, the neglect of such means may convert an intermittent into a persistent albuminuria, although for many years it may be unattended by symptoms of disordered health, ultimately results in a fatal degeneration of the kidneys.

7. Since it is notorious that albumen, even to a very large amount, may exist in the urine of persons who are apparently in perfect health, it is obvious that the urine of every patient, no matter how trivial his ailment, and the urine of every applicant for life insurance, no matter how robust his appearance, should be tested for albumen.

8. For many years past the fact that albumen may be abundantly present at one period of the twenty-four hours, and entirely absent at another, has been publicly demonstrated, and ought to be generally known. It is therefore necessary to test the urine, not only after rest in bed and before breakfast, but also after food and exercise.—*Brit. Med. Jour.*

PROPHYLAXIS OF SCARLET FEVER.—In a recent address before a medical society, Bäumler laid down the following rules to be observed in regard to the prophylaxis of scarlet fever:

1. Isolation should begin as early and be carried out as stringently as possible.

2. Isolation must be maintained till all desquamation, even on the palms and soles, is completed.

3. Persons in charge of patients should not mingle with other people, or if this be impossible, every precaution should be taken in the way of disinfecting the hands, clothing, etc., to render the danger of contagion as small as possible.

4. The air in the sick room should be changed several times a day by opening the windows wide. Care must always be taken not to expose the patient to draughts.

5. All the wash is to be first soaked in a three per cent. solution of carbolic acid, and then boiled with soft soap. The clothes worn just before the beginning of the illness and during convalescence are to be disinfected by passing hot steam through them. Instead of handkerchiefs, rags that can be burned as soon as used are to be employed. Shoes must be wiped, inside and out, with the carbolic solution. The hair should be cut short at the beginning, and the mouth frequently cleansed.

6. For disinfecting painted or papered walls, rubbing with bread that is then to be burned is the best means. In many cases the paper had best be taken from the walls and new applied,

Where walls and ceilings are undecorated they should be freshly calsomined. The wood-work, including the furniture, is to be scrubbed with the carbolic solution. Carpets, mattresses, curtains, etc., must be subjected to the action of steam. The room used by the patient should remain unoccupied, with windows open, for some time after he has left it.

7. Patients must not be transported in public conveyances, but the community should have at its disposal for such purposes easily disinfected ambulances.

8. The possibility must not be overlooked of contagion being carried by a third person, by toys, by pet animals, by food, etc.—*Am. Jour. of Med. Science.*

JABORANDI AS A PARTURIFACIENT.—Under this caption Dr. N. P. Moss reports a few cases (*N. O. Med. and Sur. Jour.*) in which jaborandi seemed to expedite labor, and his explanation of the *modus operandi* of the drug is unsatisfactory, as he seems to attribute it merely to its diaphoretic properties. His cases are also not numerous enough to serve as a basis for accurate deductions. Pilocarpin has been proven beyond doubt to possess a powerful action upon the uterus, and it has been employed to a considerable extent as an abortifacient. Professor Schauta, of Prague, has employed pilocarpin in more than forty cases as a means of strengthening labor pains. Injected subcutaneously he has found it active in 2 per cent. solution, although he has also used it in 3 or 4 per cent. solutions. Schauta went so far as to measure the effects of his doses by means of the manometer, and reached the conclusion that the influence of pilocarpin upon the uterus is a very powerful one, although it varies greatly according to individual susceptibility. In 1881 Van der Mey made experiments upon pregnant rabbits from which he obtained similar results. Gigollet has reported the case of a woman in whom premature labor was twice induced by the administration of pilocarpin, three injections at intervals of four hours having proved sufficient. Prof. Schauta gives the following rules for the administration of pilocarpin: After careful examination of the organs of respiration and circulation I would administer on the first day, if necessary, as many as three injections of a 2 per cent. solution. If by the second day no contractions had supervened, I ould use not more than two injections of the per cent. solution; and finally, on the third y one or two injections of a 4 per cent. solution, nploying always the muriate of pilocarpin. If obtained no action by the fifth day I would re- rt to other measures. It would be absurd to andon the use of muriate of pilocarpin, which s proved itself such an excellent ecbolic remedy ome cases, simply because it has not been found active in all cases when used in a 2 per cent. solution.

USE OF INDIAN HEMP IN CHRONIC CHLORAL AND CHRONIC OPIUM POISONING.—The patient was a strong, healthy man who had taken forty grains of chloral daily for a considerable period. He suffered from terrible depression and insomnia; without chloral no sleep was obtained, and even then but little; he took scarcely any food. He placed himself under complete surveillance and restraint; the chloral was peremptorily stopped, and a pill containig half a grain of extract of cannabis Indica with a few grains of compound colocynth pill was taken three times a day. The result was immediate improvement; the craving for chloral had almost vanished in twenty-four hours; natural sleep returned after a few days, and he began to enjoy his food. A second case was that of a man who had conquered the habit of excessive spirit-drinking by the frightful assistance o opium. For several months he had taken not less than two ounces of laudanum daily. Cannabis Indica was prescribed, beginning with a quarter of a grain of the extract and increasing gradually to a half, one grain, and one and a half grains, three times a day with the happiest result. Ability to take food and retain it soon returned, and after a time an appetite appeared; he began to sleep well; his pulse, which could not be counted at first, exhibited some volnme; flesh rapidly accumulated, and after three weeks he was able to take a turn upon the veranda with the aid of a stick. After six weeks he returned to his post. The name of the drug was withheld from the patients, as they were treated in India, where it may be obtained with facility in any bazaar.—*Lancet.*

THE FAVORABLE INFLUENCE OF COUGHING ON THE REDUCTION OF HERNIA.—Dr. Vaudenabrele in the *Jour. de Med. de Paris*, gives a surprising account of the effect of coughing on some cases of strangulated hernia, which have come under his observation. The first was a merchant, who had pulmonary emphysema for many years. One day his hernia became strangulated and Dr. Vaudenabrele was called in. Five minutes of taxis produced no effect. Suddenly, contrary to his directions, the patient coughed violently; while still holding the hernial tumor, he heard a gurgle and the hernia had decreased to half its volume. A repetition of the coughing was followed by reduction complete! Wondering if there could have been a dilation of the inguinal ring produced by the cough, the doctor determined to be on the lookout for anything that would throw light on the subject. He was called, not long afterwards, to see a woman, whose crural hernia was in a state of strangulation. A surgeon who had preceded him had tried taxis for more than a half hour, but

without avail. Dr. Vaudenabrele also tried it for two or three minutes; he then had the patient cough violently while controlling the hernia, and it was at once reduced. A third case was equally as amenable to this method, even after taxis had been employed both by himself and another surgeon. He therefore believes that he has found a method, simple, easy, applicable at all times and to all cases, superior to taxis and to any measure which has been described up to the present time. The author's explanation is that, in the first place, the cough is capable of dilating the inguinal and crural rings. Gas inclosed and compressed in the strangulated intestine, at the moment of expansion of the ring, makes its escape into the abdominal part of the gut. The hernia then becoming a simple one, is also reducible.—*Ed. Weekly Med. Rev.*

INFANTILE HYSTERIA.—Drs. Hagenbach-Burckardt and Duboisin agree with the view of Liebermeister, viz., that hysteria is a pathological condition of the gray substance of the brain, and must, therefore, be regarded as a psychical disease, and not a neurosis. They also claim that psychical symptoms are never absent; indeed, in some cases they are the only existing ones. The type of hysteria occurring in children is usually most simple, and, therefore, such cases are especially adapted for the study of the disease. Burckardt and Duboisin have carefully studied the history of twenty-four cases of infantile hysteria, in which predisposition played an important part. They found that in fifty-eight per cent. of the cases a hereditary neuropathic tendency could be traced, whilst fifty per cent. of the cases inherited tuberculosis. Only three cases, in which the disease was but slight, were free from both the above-named predispositions. All the patients, with two exceptions, were anæmic. Two had previously suffered from poliomyelitis anterior acuta. In eight cases only was the initiative cause traced to fear, shock, etc. But few instances of ultimate cure were observed. The majority remained anæmic, and continued to be troubled with either headache, palpitation, nervousness, bodily and mental weakness, weakmindedness, or hysterical phychosis. The prognosis may, therefore, be regarded as unfavorable. This, however, is largely dependent upon early diagnosis and treatment.—*Centralbl. für Klin Med.—Med. News.*

THE INFLUENCE OF THE NERVOUS SYSTEM ON RENAL FUNCTION.—The *Lancet* gives an abstract of Dr. Francesco Spallitta's experiments, made with the view of ascertaining whether the effects produced on the renal secretion by lesions of the medulla oblongata are due, as held by Ustimowitsch, Heidenhain and B. Sachs, to the alteration of the blood-pressure caused by the lesion, or, as supposed by Eckhard, to some morbid change in the innervation of the kidney. The plan adopted was to cut through the spinal cord at various levels, and to watch the effect upon the secretion of urine.

In order to be certain that the urine found in the bladder at the necropsy was secreted after the spinal cord had been cut, a solution of iodide of potassium was injected under the skin after the operation, and the urine tested for iodine. The results obtained were as follows:

1. Lesions of the cord at the base of the first dorsal vertebra produce no changes in the renal secretion.

2. Sections at the seventh cervical and first dorsal vertebra permit the continuance of the secretion.

3. Sections at the sixth, fifth or fourth cervical vertebra allow the secretion to continue, but cause the urine to contain a certain amount of albumen.

4. Sections at the third or fourth cervical vertebra arrest the secretion altogether.

5. Electrical stimuli applied to the cord in the cervical region arrest the secretion entirely.

The theory which seems to Dr. Spallitta to accord best with these facts is, that the effect on the renal secretion of lesions of the cord is mainly due to the destruction of special nervous fibrillæ existing in the cord which govern the function of secretion of urine.

PERSISTENT VOMITING.—Persistent vomiting, especially that of pregnancy, is often most difficult to overcome, and baffles every effort of the physician; indeed, several fatal cases have been lately reported. Dr. Blumensandt, in *L'Union Médical*, says that he has found the following formula invaluable in such cases:

℞.—Hydrochlorate of cocaine .	3 grs.
Tincture of anise . .	f℥ijss.
Spirits of menthol . .	f℥ijss.
Linden-flower water . .	f℥v.
Syrup of cinnamon . .	f℥j—M.

A dessertspoonful to be given every hour until the vomiting has ceased.—*Med. News.*

TRICHOPHYTOSIS DERMICA.—Campana, of Genoa, believes that the trichophyton is capable of germinating and growing in the connective tissue of the skin ("Archiv f. Derm. u. Syph.," 1889, Heft 1, p. 51), and, further, that the chief part of such tumors as are formed in connection with ringworm is composed of the fungus itself. He gives a case of diffused ringworm of the body, onychogryphosis of all the toes, and a tumor of egg size (location not stated). Mycelia and spores were found not only in the scaly patches, but also in the nails and in the tumor. The latter consisted of hard fibrous connective tissue, which in places showed signs of beginning necrobiosis.—*N. Y. Med. Jour.*

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PLACENTA PRÆVIA.

One of the most difficult and trying positions in which the young and inexperienced accoucheur can be placed, is at the bedside of a woman from whom the life-blood is rapidly escaping through separation of a portion of the placenta, when attached to the lower third of the uterus, and generally caused by the expansion of the neck, and dilitation of the os.

If his attention has not been previously especially directed to this fortunately rather unfrequent occurrence, he finds himself at no little disadvantage in deciding what course to pursue, and extremely liable to error in practice, or becomes totally inadequate at the very time when his knowledge and skill should be effective in saving the life of the mother, and possibly the child.

Within the last thirty years the fatality attending placenta prævia has been reduced from 30 per cent. to 5 per cent. by the early removal of the uterine contents, the improved methods adopted in inducing premature labor, and the general antiseptic treatment, during and subsequent to delivery. It has long been a question among experienced accoucheurs whether it is advisable to postpone delivery till labor sets in spontaneously, or at all possible to control or stop the hæmorrhage from time to time, or to induce labor and deliver as soon as any considerable flowing has occurred, when placenta prævia is clearly diagnosed.

In later years the general concensus of opinion among most experienced authors is, that we should, rather than assume the greater risk of the expectant plan, proceed at once to induce labor and empty the uterus, no matter at what point of pregnancy hæmorrhage from this cause supervenes. The methods available to restrain or stop the flowing, all depend on pressure, by the trampon primarily till the os is sufficiently dilated, if not already large enough to admit one or two fingers. Then the placenta should be separated from the uterus as far as can be detached by one finger; expansion of the os should be induced by the fingers, thereby bringing on contractions of the uterus. If now the uterine action is ineffective to produce sufficient pressure of the head, and the forceps cannot be applied to keep the pressure continuous by moderate traction, so as to stop the flowing, the medical attendant should at once press up the hand either at the margin of the placenta or through the placenta, if centrally located, and resort to version, drawing down the leg, and making a breech presentation. If the os be too small to introduce the hand, turning by combined version must be attempted. With a leg through the os, and the breech well down, flowing is effectually prevented. Then we can safely wait for the natural contractions of the uterus to expel the child, and secundines, assisted possibly by gentle traction on the leg.

In this connection the following rules recently laid down by Braxton Hicks, as embodying the ideas of the most practical and skilful accoucheurs of our day, will be important.

1. After diagnosis of placenta prævia is made, proceed as early as possible to terminate pregnancy. 2. When once we have commenced to act, we are to remain by our patient. 3. If os be fully expanded, and the placenta marginal, we rupture the membranes, and wait to see if the head is soon pushed by the pains into the os. 4. If there be any slowness or hesitation in this respect, then employ forceps or version. 5. If the os be small and the placenta more or less over it, the placenta is to be carefully detached from around the os; if no further bleeding occur we may elect to wait an hour or two, but should the os not expand, and if dilating bags are at hand, the os may be dilated. If it appears the forceps can be admitted easily, they may be used, but if not, version by the combined external method

should be employed, and the os plugged by the leg or breech of the fœtus; after this is done the case may be left to nature, with gentle assistance, as in footling and breech cases. 6. If the os be small, and we have neither forceps or dilating bags, then combined version should be resorted to, leaving the rest to nature, gently assisted. 7. If during the above manœuvres, sharp bleeding should come on, it is best to turn by the combined method in order to plug by breech. 8. When hæmorrhage occurs before the end of seventh month, version by the combined method, no force following is the best plan.

THE VALUE OF BEEF-TEA AS A NUTRIENT.

This is an age of iconoclasm, not only in the spiritual world but also in medicine. The man who, a few years ago, would have had the temerity to question the value of beef tea as a food, would have been looked upon as a fit subject for an insane asylum, by a majority of the profession. And indeed it is by no means certain that even yet there does not exist in the minds of not a few medical men, the idea that the ever-popular and ubiquitous beef-tea is the sheet anchor in those diseases attended by failing strength and imperfect powers of nutrition. To say that the medical profession as a whole is educated up to the point of believing beef-tea to be almost useless as a food, would be, we fear, to take too optimistic a view of the scientific attainments of that profession. While this belief obtains in the minds of some medical men, it is almost universal with the laity, and the good neighbor who makes and carries to the patient a bottle containing the strength of two pounds of beefsteak, is firmly convinced that if the sufferer does not gain strength from that decoction, he will not from anything else, and that whether acting in the capacity of neighbor or nurse, she has done all that can be done in the way of alimentation. How few people but look surprised—and something more—when the physician tells them that their much-loved and always trusted beef-tea is a delusion, as to its alleged properties as a food. Indeed that idol is not so easily thrown down, and the physician's *ipse dixit*, notwithstanding, the worshippers will still offer it a willing and not half-hearted service, not infrequently to the detriment of the patient and to the serious interference with the physician's plan of treatment. For if beef-tea be smuggled in to a patient and he is buoyed up by frequent libations to this goddess, early in fevers and other wasting diseases, he is simply placed in the position of one who uses up his capital before the financial crisis comes, and when the dread day is at hand, he has no bullion to meet the run on his bank. The beef-tea has assuredly made him feel better at the time, as indeed whiskey or brandy would have done with less ulterior harm, but has wasted his force by unlocking it and rendering it potential, without adding anything appreciable in quantity, or at all commensurate with the amount needlessly squandered by the exhibition of the *stimulant*, unwisely given in the belief that it is a food or force producer.

Patients and their friends cannot be expected to understand this matter, but it is the duty of every practising physician to make himself acquainted with the true value of this much vaunted and entirely over-estimated remedy, and by a clear understanding of the place it really occupies, to be able to so impress his clientèle, that a new order of things may be introduced in this matter. We must educate our patients in a great many directions, and we believe that in none is there more need for a hearty belief by the people at large, than in the inutility of beef-tea as a *food*.

It would render this article too long to give the chemistry of this compound and to demonstrate the facts stated above, but in our next issue we shall undertake to do so, in order that our readers may have a reason for the faith that is in them, if those who still hold out for beaf-tea will be convinced.

TREATMENT OF ASTHMA.

Within a recent period we have noticed in our exchanges many articles on the treatment of asthma. As to the remedies recommended for this disease, there is no end. With no intention of deprecating the value of several old and well-tried remedies, we shall now only refer to agents which have recently forced themselves to the foreground. Of these perhaps citrate of caffeine stands first. The dose is 1 to 5 grains dissolved in warm water. It does not appear to be

a very dangerous agent, since, in one instance, a patient took 60 grains by mistake, without fatal consequences. Caffeine is said to afford very prompt relief. Arsenic, in the form of 2 or 3 minims of Fowler's solution, is reported as making striking cures in appropriate cases. Arsenic has the peculiar property of supporting respiration, as, for example, in making ascents. Its beneficial effect in asthma is no doubt due to this property. Iodide of potassium is sometimes combined with Fowler's solution. A valuable combination in the bronchitic form its iodide of potassium and carbonate of ammonia. Chloral hydrate, either alone or in combination with bromide of potassium, is also followed by excellent results in certain cases. Cocaine in doses of $\frac{1}{6}$ of a grain of the muriate, given in the form of tablets, has been very highly recommended for the relief of the spasm. In the form of stagnant respiration with congested lips and nose, and cold extremities, strychnia has been found highly useful. The liquor may be given in doses of from 3 to 5 drops with dilute phosphoric acid. When defluction from the mucous surface is very profuse, belladonna probably answers best. Medium doses should be given every four hours. Grindelia robusta a short time ago was largely used; but failed to come up to expectations, and is now much less used. Quebracho is also a remedy in much repute.

We occasionally meet cases of continued distress despite the use of ordinary means. In these cases there is usually much bronchial tumefaction and dryness. In cases of this class nothing can equal $\frac{1}{4}$ grain of pilocarpine with $\frac{1}{4}$ grain of morphine, administered hypodermically. The relief is prompt, the tumefaction subsides, and is followed by profuse expectoration. As to change of climate, experience shows that the asthmatic should not seek a dry atmosphere. A warm, moist atmosphere is the most suitable. In mild cases a mere change from one locality to another may create immunity from this harassing trouble.

The remedies here mentioned, which are culled om a large number of remedies in use, seem to the ones most relied on at the present time. must not be understood that the remedies in ı list are to be depended upon in symptomatic hma, when the condition is merely a symptom a disease usually of a much graver nature. The uchial muscles are here in a normal condition, some probably serious organic trouble being the cause of the symptom, and requiring a separate treatment, as indicated by the pathological conditions.

Creolin in Obstetric Practice.—It would seem that creolin has come to stay. Much has been written in medical journals during the past few months, regarding its valuable antiseptic properties. The trend of professional opinion seems to be in its favor. In this connection the experience of Dr. Theophilus Parvin, who has been using it extensively of late, will be of interest. He finds it valuable (*Practice*) in cervical catarrh, in which he applies it at intervals of three days. In the strength of one teaspoonful to a pint of water it is used wherever a vaginal injection is indicated. Benzoated lard with the addition of 4 per cent. of creolin makes a reliable antiseptic ointment, useful alike to the obstetrician and gynecologist. Parvin makes use of this in tamponing the vagina in cases of descent or posterior displacement of the uterus. For this purpose a long strip of absorbent cotton smeared with the ointment, is tucked alternately into the anterior and posterior cul de sac until the vagina is packed either partially or completely as the case requires. Such a tampon has been left *in situ* by Dr. Parvin as long as six days, at the end of which time the only odor detected was that of creolin. In obstetrical practice creolin possesses the advantage of revealing itself both by sight and smell, thus obviating the dangers which accompany the use of sublimate and carbolic acid, which are often used in too strong solutions. Mixed with water in the proportion of one teaspoonful to the pint, creolin makes a milk-colored fluid.

Treatment of Sprains.—It may be observed that a sprain is frequently treated with a liniment advised by physicians. It is indeed painful to see a physician writing a prescription for a sprain. There are but two indications in the treatment of sprains: 1—To provoke rapid absorption of the fluid effused around and within the joint; and 2—To favor cicatrization of the torn parts by immobilizing the articulation. Now, the modes of treatment hitherto in vogue do not fulfil these two indications. Massage would seem to present some real advantages, but it can be of little ser-

vice in the case of severe sprains, and mild injuries would probably do as well under rest alone. An elastic bandage, the depressed parts being covered with a layer of cotton so as to prevent too great pressure over the prominence, and thereby causing sloughs, will meet the first indication, and by its use in procuring rest it will meet the second indication. This bandage acts like massage in promoting absorption and and also secures immobility of the joint. It is of equal service in sprains complicated with rupture of points of insertion, whereas massage would be productive of harm in cases in which splinters of bone were torn away. The practice of relieving the mind of the patient by giving him something to do in the way of applying bad-smelling liniments is a pernicious one, and really shows an unprofessional or unscientific attendant.

ANTIPYRINE IN DIABETES.—This very useful drug seems to have found another field for operation in diabetes. It appears that a number of observers, chiefly French, have been experimenting with it on this disease. Thus (*Bull. de l'Acad. de Méd.*) it is stated that with a daily dose of 30 to 45 grains, and without the observance of a special diet, Panas found great improvement in all symptoms. Sée says that a cure, in some cases temporary, in others permanent, is effected by antipyrine in those patients in whom the amount of sugar in the urine does not exceed from 2½ to 3 ounces to the quart. Under its use all the characteristic symptoms disappear, provided that the diet be rich in nitrogenous elements and poor in hydrocarbons, though the latter need not be entirely excluded. No effects can be hoped for in advanced cases, or in those in which the excretion of sugar exceeds the limits just stated. Robin, on the other hand, considers the drug but suspensory in its action, and warns of the too free use of it. Large doses he found interfered with the appetite and caused albuminuria if persisted in. Patients should never be allowed to use it habitually, and it should at once be stopped with the appearance of the first signs of poisoning.

COLON-FLUSHING IN TYPHOID FEVER.—Dr. Buchan, in the *Med. Rec.* presents the following conclusions in regard to the above:

1. That from one to three quarts of cold water can be easily and safely passed into the colon which will rapidly lower a high temperature.

2. That I believe, in some of the cases, the water passed the ileo-colic valve, entering the small gut.

3. That tympanitic distension will always disappear with passing away of the water so injected.

4. That putrefactive fermentation of the bowel-contents is prevented by such use of water.

5. That toxic substances are more rapidly absorded by the cæcum than by any other portion of the intestinal canal, and that, by a judicious and careful washing with antiseptic water, we can prevent the absorption of such toxic substances, and prevent and modify general systemic poisoning.

BROMOFORM IN WHOOPING-COUGH.—According to Dr. Stepp (*Deutsche Med. Wochen.*), whooping-cough is readily cured by bromoform. In a large number of cases no evil results have been noted, and its action upon the disease has proved most satisfactory. He orders it in very frequent doses, children taking from five to twenty drops during the twenty-four hours. It is very sparingly soluble in water, and shonld therefore be prescribed in alcohol. The Dr. believes that under this treatment the bronchial catarrh and lobular pneumonia do not generally occur. He believes also in the prophylactic power of the drug, other inmates of the family being protected from the disease by taking it in ordinary doses. Dr. Stepp believes that bromoform is either excreted unaltered by the lungs or is separated into its elements, and that the free bromine is excreted by the lungs. In this way an effect on the bacilli of whooping-cough could be easily supposed to result.

DEATH FROM THE ENTRANCE OF AIR INTO THE CIRCULATION.—Dr. Hane (*Ibid.*) has formulated the following conclusions from experiments made upon 70 dogs.

1. Death never occurs from the entrance of air into the ordinary veins of the body unless the quantity be enormous—from one to several pints, a quantity which cannot enter unless deliberately sent in by a surgeon.

2. The cases on record have been due to other causes than air and have not been proved.

3. The tendency of the vessel to collapse and the leakage of blood prevent any entrance of air,

and it would seem probable that a clot has generally caused death, not the air itself.

INGROWING TOE-NAIL.—G. F. Popuder (*Br. Med. Jour.*) prevents the ingrowing of the great toe-nail by allowing the nail to grow square, never cutting down at the corners, and by the wearing of boots sufficiently wide and deep to prevent any pressure on the toes. For the cure of the complaint, he recommends an elongated wedge of cotton-wool, lint or soft linen rag, carefully tucked in (with a wooden match, flattened at one end), between the flesh and the nail, the end of the wedge being tucked as far as possible under the angle of the offending nail which may sometimes be found buried under the granulations. The relief is great at once, and a complete cure usually takes place in a week or two.

WHOOPING-COUGH.—Dr. Williams, of Milwaukee (*Medical World*) says that oil of amber, properly comminuted, and well rubbed over the pit of the stomach, chest and spine, in a warm room, or by a warm stove, once a day, is as nearly a specific in cutting short the period of spasmodic cough, as anything we have. The following is the formula used:

℞—Ol. olivæ, ... ℥ iv.
Ol. succin., ... ℥ ij.
Ol. caryoph., q.s., to strongly scent.—M.

Sig.—♏ xv to ʒ ij, to be rubbed in well, according to age of patient.

Internally, during the catarrhal and spasmodic stages, the following is best:

℞—Glycerini (pure), ... ℥ iij.
Chloroform, ... ℥ j.—M.

Sig.—Gtt. x to ʒ j, according to age; at first, every two hours, until the symptoms are under control, then three times a day.

In the third stage, without stopping either of the above, the following stimulating expectorant is given:

℞—Ammoniæ carb., ... ʒ j.
Tr. camph. co., ... ʒ j.
Tr. scillæ, ... ℥ j.
Tr. Senega, ... ad. ℥ vj.—M.

Sig.—℥ ss every four hours, for an adult; children in proportion to age.

Quinine in pill form should be given in full doses, from first to last. Under this treatment whooping-cough is a very tractable disease, and runs its course in from ten to twenty-one days.

TREATMENT OF DYSENTERY.—Dr. L. H. Davis writes to the *Memphis Med. Monthly*, stating that he has found the following combination for a suppository very efficacious in acute dysentery. He uses it after a saline aperient, and has found it more successful, in quite a number of cases, than any other treatment. He says it has proved especially applicable when an irritable stomach was present from the first, thus preventing the satisfactory use of ipecacuanha:

℞.—Cupri sulphatis,
Zinci sulphatis,
Morphiæ sulphatis, āā . . . gr. ij.
Plumbi acetatis, ... gr. iv.
Ol. theobrom., ... q. s.
M.—Ft. suppos. No. viii.

Sig.—One to be introduced as indicated, or after each action of the bowels.

He usually follows the saline by the internal administration of tincture of nux vomica and quinine, and a restricted diet.

TOTAL EXTIRPARATION OF THE UTERUS.—At the third German Gynæcological Congress, Münchmeyer reported (*Am. Jour. Med. Science*) the results of vaginal extirpation of the uterus as performed at the Dresden clinic between 1883 and 1889. The mortality in 160 operations was 5.4 per cent. In 80 cases the uterus was removed on account of cancer; only 4 patients succumbed to the operation, while 14 had since died, 10 from a recurrence of the disease; 62 patients were still living, of whom only 3 had undoubted recurrence. These favorable statistics showed that the operation should be undertaken early. In the discussion which followed, Freund and Hegar reported cases in which no recurrence had occurred ten years after the operation.

THE MOST PROBABLE PERIOD OF CONCEPTION.—Schneider (*Memorabilien*) thinks the most probable time of conception is for four days preceding the menstrual flow and the eight days following, twelve days in all. In support of this he instances the Mosaic law, which forbids intercourse for fourteen days after menstruation. The Jews were very prolific, and Schneider believes the most fruitful intercourse is before menstruation, when coi-

tion favors the rupture of the ovisac; after menstruation he believes coition is less often followed by conception. Of course, during the four days previous to the flow the spermatozoa would retain their vitality in the genital passage of the female, and thus be ready to fecundate the urine when it entered the uterus.

MENTHOL IN NEURALGIA.—Menthol is very popular (*Br. Med. Jour.*) as a local remedy for relieving neuralgia of the fifth nerve, and other painful afflictions. Dana advises its internal administration in doses of five to twenty grains to relieve pain. It gives a pleasant feeling of warmth, and stimulates the cardiac action, without increasing its rapidity, and raises the arterial blood-pressure. It is especially useful in megrim and supra-orbital neuralgia, and in the headaches of neurasthenic and anæmic patients, also in sciatica. Saffrol in twenty drop doses is also good in head ache and sciatica.

THE USE OF DRUGS FOR THE UTERUS.—Dr. Lombe Athill recently stated (*Annals of Gynæol.*), that no ordinary medicines produce any effect on menstruation when taken during the flow, excepting the drastics. He doubts whether ergot, savin, quinine, or strychnine have any appreciable action on the muscular fibres of the uterus. Astringents are useless in menorrhagia and metrorrhagia, including tannin, gallic acid, minor alacids, etc., in his opinion. Full doses of tincture of iron are useful, but only in anæmic women, while he relies on ergot alone.

FOR GASTRIC ULCER.—Dr. Longfellow gives, in the *Lancet-Clinic*, a formula which he says has done good service in gastric ulcer:

℞.—Liq. potass. arsenit., ... ʒj.
Tinct. opii deod., ... ʒijss.
Acid hydrocyanic, dil., ... ʒjss.
Aquæ destil. q. s. ad. . . . . ʒiv.—M

Sig.—One teaspoonful every three hours, after taking milk.

Minute doses of cocoaine have at times been indicated, and combined with the above, with the result of decided relief of pain. All starch and sugar foods are to be withheld.

GASTRO-INTESTINAL CATARRH IN INFANTS.—Dr. Irwin (*Am. Pract. and News*) treats gastro-intestinal catarrh in infants by first evacuating the bowels by a mild laxative, such as castor-oil, and by regulating the diet, the food consisting of barley-, or rice-water only. Where further medication is necessary, a few doses of the following mixture, for a child one year of age, usually gives relief:

℞—Tr. opii deodorat., . . . gtt. xv.
Ac. boric (Squibb's), . . grs. xx.
Aq. menth. pip., . . . ʒ ij.—M.

Sig.—ʒ every two or three hours.

BURNS.—The best treatment for burns and the indolent ulceration which follows them, is the following:

℞—Iodal,
Ichthyol, ... āā ʒ j.
Cosmoline, ... ℥ j.
m ft. ung.
(*Therapeutic Analyst.*)

L'Union Med. recommends the following:

℞—Ac. carbolic, ... p. 1.
Ext. conii, ... p. 40.
Iodoformi, ... p. 80.
Ung. rosæ, ... p. 600.
m ft. ungt.

STRYCHNIA IN SNAKE-BITES.—Says Dr. Mueller (*Australian Med. Gaz.*), strychnine in snake-bite acts with the unerring certainty and precision of a chemical test. Purely physiological in action, it neutralizes the effects of the snake-poison, and if pushed beyond the amount needed to neutralize the snake-poison, would itself act as a poison. Its poisonous effects, on the other hand, could be combatted by injections of snake-poison, could the latter be at hand in an emergency of poisoning by strychnine.

CHRONIC DYSENTERY.—Dr. F. T. Field (*Medical World*) recommends the following for chronic dysentery:

℞—Tr. opii, ... ʒ iij.
Ol. terebinthinæ, ... ʒ iij.
Gum acaciæ,
Saccb. alb., ... āā ʒ ss.
Ol. gaultheriæ, ... ʒ ss.
Glycerini, ... ℥ ij.
Aquæ, ... q.s. ad. ʒiv.—M.

Sig.—ʒ j every four, five or six hours, according to the severity of the case.

VOMITING IN PREGNANCY.—A writer in the *Lancet* says: "I have not failed once for twenty years, by a single vesication over the fourth and fifth dorsal vertebræ, to put an end at once to the sickness of pregnancy for the whole remaining period of gestation, no matter at what stage I was consulted. The neuralgic toothache and pruritus pudendi of the puerperal condition yielded as readily, and to one application.

SALOL AND CHOLERA.—Professor Löwenthal, says the *Lancet*, who has lately made experiments on the action of salol on cholera bacilli in Professor Cornil's laboratory in Paris, of which an account was given in these columns in "Medical Paris of To-day," has received a special mission from the French Government to proceed to Tonquin, in order to study the effects of salol on cholera patients. Professor Löwenthal is for this purpose nominated a navy medical officier *à titre d'étranger*, but is allowed full liberty of action. This is the first time that the French Government has selected a member of another nation for such a post, and it well indicates the tendency of science to draw nations nearer together.

SYCOSIS VULGARIS.—Dr. O. Rosenthal, in the *Fortschritte der Med.*, August 1st, claims that the etiology of sydosis is still very uncertain. Efficient therapeusis he has nevertheless found. He substitutes for the former painful methods of treatment, the use of the following salve, which, it is claimed, acts almost like a specific:

R.—Tannic acid . . .	ʒjss.
Lactate of sulphur . . .	ʒiij.
White oxide of zinc Amyl } .	ʒjvss.
Vaseline	ʒjss.—M.

The following modification will be found equally valuable:

R.—Tannic acid . . .	15 grs.
Lactate of sulphur . . .	30 "
Vaseline.	ʒv.—M.

IRRITABLE BLADDER.—It is stated (*Ibid*), that irritable bladder is often due to imperfect evacuation. In cases that have resisted treatment, dilation of the meatus will sometimes allow a certain quantity of urine to escape after the bladder is supposed to have been emptied. There is a loss of tone in the muscular wall of the bladder, which tr. ferri. chlor., with cantharides and nux vomica, will relieve.

HÆMORRHOIDS.—Dr. F. T. Field (*Med. World*) has treated a case of hæmorrhoids, during gestation, successfully by the following:

R.—Antipyrine, ...	ʒ j.
Bismuth subnit., ...	ʒ j.

Ft. suppos. No. xij.

Sig.—One to be used on going to bed, and another after bowels had moved in the morning.

GLANDULAR AFFECTIONS OF THE NECK.—Calcium chloride, in doses of from two to four grains for children, and from ten to twenty grains for adults, is highly recommended (*Am. Pract. and News*) for glandular affections, especially of the neck. Its action is facilitated in adults by applying iodine at the same time.

THE American Academy of Medicine is endeavoring to make as complete a list as possible of the Alumni of Literary Colleges, in the United States and Canada, who have received the degree of M. D. All recepients of both degrees, literary and medical, are requested to forward their names, at once, to Dr. R. J. Dunglison, Secretary, 814 N. 16th Street, Philadelphia, Pa.

CHOREA.—M. Jules Simon claims (*Med. Times*) that antipyrine gives best results in the treatment of chorea. He begins with half a grain daily, and increases the daily amount taken, by half a grain, until fourteen or fifteen grains are taken.

QUINSY.—In the early stages of quinsy, chloral hydrate is (*Med. Rec.*) nearly a specific, three or four grains to the ounce of glycerine being used as a gargle. It is locally antiseptic, astringent, and sedative.

HÆMATEMESIS (*Pittsburg Med. Rev.*) is quickly relieved by water swallowed as hot as can be borne, in quantities of half a tumblerful at a time. No further hæmorrhage occurs, and fragments of clots are vomited.

DR. Carl Koller, who achieved such world-wide renown in the discovery of the application of cocaine as a local anœsthetic, has been appointed Instructor in Ophthalmology at the New York Polyclinic.

DEBUT OF A LADY PROFESSOR.—Signorina Giuseppina Cattani recently read herself in as incumbent of the newly-founded chair of bacteriology in the University of Bologna. The subject of her lecture was "bacteriology in its relation to modern pathology." She was received with great applause. The learned lady is 31 years of age, and has been assistant in the Bologna Pathological Institute since 1884

R. RHODES REED, M.R.C.S., Norfolk, England, says: I have prescribed S. H. Kennedy's Extract Pinus Canadensis as an injection (one part to six), in an obstinate case of chronic gonorrhœa, with very satisfactory results. The discharge considerably diminished during the first week, and after a fortnight's use the patient reported himself quite well.

ANTIPYRINE in doses of from ten to fifteen grains at six o'clock in the evening and repeated at 8 or 9 o'clock, is said to have cured numerous cases of enuresis in children of from 4 to 6 years of age. The same remedy has been found very efficient as an antigalactic.

L. C. CARR, M.D., Prof. of Obstetrics in Cincinnati College of Medicine and Surgery, Cincinnati, Ohio, says:—I have given Papine (Battle) a fair trial and am well pleased with its action, especially so in the case of an infant suffering with an attack of convulsions. Its action was speedy and safe.

THE ONTARIO MEDICAL LIBRARY. — We are pleased to note the solid progress this institution is making. The donations of books and periodicals are, for a Province like Ontario, large and valuable. Too much praise cannot be accorded to the officers, who by their zeal and painstaking are rendering the Library a credit to the proiession of this country. The entire medical library of the late Dr. Krauss of this city has been transferred to the Ontario Medical Library Association.

BRITISH DIPLOMAS.—Drs. Geo. F. Rennie and W. A. Dixon (Trin. Med. Col.) have recently taken the M.R.C.S., Edin.

EQUAL parts of lactic lead and glycerine are said to remove freckles.

Books and Pamphlets.

CHEMISTRY: General, Medical, and Pharmaceutical, including the Chemistry of the U. S. Pharmacopœia; a Manual on the General Principles of the Science, and their applications in Medicine and Pharmacy. By John Allfield, F.R.S., etc. Twelfth edition. Philadelphia: Lea Brothers & Co., 1889. Toronto: Carveth & Co.

This has always been a popular work with the medical profession, for the reason that the author has noted at length—in proportion to its importance—every substance having an interest to the followers of medicine and pharmacy. The present edition contains such alterations and additions as are necessary for the demonstration of the latest developments of chemical principles and the latest applications of chemistry in pharmacy. The work now includes the whole of the chemistry of the United States Pharmacopœia and nearly all the chemistry of the British and Indian Pharmacopœias. In Organic Chemistry, that *bête noir* of every young student, the author has adopted the classification now generally in use, and the whole section is in such a form as will render the acquisition of a knowledge of the different subjects as easy as possible. The work is a complete, practical and very useful one, and as such we recommend it to our readers.

A TREATISE ON THE SCIENCE AND PRACTICE OF MIDWIFERY. By W. S. Playfair, M.D., LL.D., F.R.C.P. Professor of Obstetrics in King's College, etc. Fifth American, from the Seventh English edition; with notes and additions by Robert P. Harris, M.D.; with five plates and 207 illustrations. Philadelphia: Lea Brothers & Co. Toronto: Carveth & Co. 1889.

It is needless to say anything as to the merits of this well-known classic in Midwifery. The work has always been justly popular. In this new edition some portions have been re-written and several new illustrations added. But the most important feature is the adoption of the new nomenclature decided on by the International Medical Congress, held at Washington in 1887. This is a step in the right direction, as it will lead to something like uniformity in obstetric description. The work is heartily recommended to students and practitioners needing a handbook of clear and useful information on the subject.

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PHYSICAL EDUCATION.

BY B. E. MCKENZIE, B.A., M.D.

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Competition is felt to-day, not less in education than in commerce; the machine finds nearly as much employment in our school system as in politics. Competition has become a crying evil, so that mental cramming is to-day a barrier in the way of attaining individual or national greatness. Upon the school children, and especially upon the girls, the strain has fallen most heavily. The machine emphasizes what can be put down in black and white, it tends to obliterate the individuality that seeks to assert itself, and by the ever-haunting "examination demon, who is going up and down in the land, seeking whom he may devour," it reduces to an unvarying level all grades of taste and genius which Nature, in her simplicity, has given us.

There is an Eastern fable which tells of a learned physician who cured the Prince of all the Faithful of a seemingly mortal malady, by the daily swinging of a pair of clubs, the mysterious virtues of which diffused themselves through the palms and thence into all parts of the system, carrying renewed health and vigor.

Asclepiades, a Greek physician of the second tury is said, by Pliny, to have cured all ills by sical exercise alone.

he principle thus alluded to in fable and his- y was adopted by the Greeks as an important ne in the foundation upon which they built a erstructure of art, literature, philosophy and sical development which, in many respects, lern nations have not been able to equal. The cultivation of the body by means of gymnastics, fostered by the reward and fame which came from success in their public games, and by the strict application of the laws of heredity, resulted in the nearest approach to physical perfection in an entire people, that the world has ever witnessed. With them physical culture attained to the dignity of a science. The gymnasia not only wielded a power in the development and perfection of the physique, but exerted a greater and more enduring influence upon art and upon intellectual development, and in the formation of an ideal of physical beauty and excellence which reacted upon their art, literature, and entire civilization, in such manner and degree as made them pre-eminently superior to the rest of the world. So intimately interwoven with the whole life of the Greeks, were these physical exercises, that they could not picture to themselves even the Islands of the Blest, without wrestling grounds. One writer says: "A Greek became not a soul, not a body, but a man, a complete, thorough, perfect, all-round being, who was neither a brain with an appendage of legs and arms, nor a physical organism with the brain left out."

The education of an Athenian lad began with his seventh year and fell into three divisions, elementary instruction in the three R's, music, gymnastics. Out of this system grew the typical Greek, whose form was not hampered and trammelled by artificial supports, but was simple, free, natural, gracefully developed; whose intellect, in harmony with its environments, was fitted to run out in spontaneity and find in the world of thought the beauties and excellencies which have made their literature as enduring as time.

Afterward, the love of gymnastics became with some an over-mastering passion, and the games ceased to be a means of individual and national culture, the people became admiring spectators rather than participators, and physical training became debased by professionalism.

Amongst the Romans gymnastics never enjoyed the same reputation and never became a branch of public education, although the soldiers obtained a thorough and varied physical training because of the advantages afforded in military life. Instead of the manly games of the Olympia, we read of the contests of gladiators.

From the days of Greece and Rome till recent

times, gymnastic and athletic proficiency was attained exclusively by the nobility and professional soldiery and found its field of display in tournament and war.

Among modern nations the Germans were the first and have been the most assiduous in their efforts to promote the cause of physical education. As early as 1811 the turnplatz and turnvereine were established in Germany, and a work on the principles of gymnastics was published. Influenced by the example of these societies, similar ones sprang up in Switzerland, Sweden, and France. After the Crimean war a commission was appointed in England to make enquiries into the subject; and based upon the report of the commission, a code of physical exercises was adopted, and is now in force in the British army. To-day, every male German receives a systematic physical education. Not only must the boy give attention to it during his school life, but a system of exercises is employed throughout all the armies of the empire, and every adult male is required to give three years' military service.

In 1881 there were, in the Northern and Middle States, only three educational institutions in a thousand, which gave official sanction and attention to physical education. Up till the present, very little attention has been given to this subject, in this country, and there is no means provided whereby teachers may be thoroughly qualified for aiding that physical growth, which should go hand in hand with intellectual and moral development.

The number of women in a state of semi-invalidism, the many girls with crooked spines, stooping shoulders, contracted chests; the large proportion of school children wearing glasses and the large infant mortality, all attest the lack of that physical development which is an essential pre-requisite to greatness in the individual and the nation, and which can result only from systematic and wisely selected means whereby all the structures and organs which go to make up and sustain the physical existence can be brought to a condition of normal health and efficiency. Worcester says of education, that it comprehends all that series of instruction and discipline which is intended to enlighten the understanding, correct the temper and form the manner and habits of youth and fit them for usefulness in their future stations.

Huxley, in describing a man who has had a liberal education, says: "That he is one who has been so trained in his youth that his body is the ready servant of his will and does with ease and pleasure all the work it is capable of."

Rousseau, recognizing the relationship existing between volitional energy and health of body, expressed the thought tersely, thus: "The feebler the body, the more it commands; the stronger, the more it obeys."

The power of physical training, rightly understood, encouraged and applied to teach habits of endurance, self-abnegation and discipline, is not commonly appreciated. All means of education fail which do not chasten and mould the mind to orderly methods, fit the body for ready obedience to the will and prepare every organ and tissue to give its qnota of support to aid the individual in the accomplishment of life's purposes. Education consists, not so much in the possession of knowledge and in the massing of facts and figures, as in the ability to employ knowledge and use all available data for practical work. While the intellect is limited and diverted from the performance of its legitimate functions by nerves that are out of chord, digestive organs that fail in their appointed work, or blood that is surcharged with waste matter which the organization cannot throw off, the resultant of all the forces at work represents, not as it ought to do, the sum of all, but what remains when the balance is struck in estimating the various agencies opposing one another. It was not alone through the physical force of their armies, that Sparta and afterward all Greece, attained and for years, kept such a commanding and impregnable position among the nations of antiquity. In acquiring that physical training which fitted them for the service of armies, it was imperative to cultivate sobriety, cleanliness, self-restraint, temperance, moderation, and regularity in all things. Then, as now, the cultivation of physical power produced not only brawny muscles and well-knit physique, but increased intellectual vigor and augmented moral power.

Exercise is the chief agent to employ for the purpose of aiding development and for bringing physical structures up to the highest standard of form and usefulness. It may be defined as movement produced by muscular contraction; and it varies in degree, from that which simply moves

the organ or limb itself, to the manifestation of power called for in overcoming the greatest resistance.

Every part of the body is made up of cells, small ultimate portions which are continually changing, particles which have their cycle, birth, life and death, and whose constant change is essential not only to our activity and well-being but to existence itself. With every breath, every muscle contraction, every heart-beat, every thought, cells die and are dismissed by the various tissues of which they had formed a part. Picked up by the ever-moving blood-current, they are hurried on to the organs of elimination and removed from the system as cast-off material. By the digestion of food other cells are being fitted to take the place of those that served their day and were cast off. Taken up by the same blood-current, these new cells are being carried to every part of the body, and each tissue takes up its portion and adapts it to its own purposes. The cessation of this change of new material for that which has fulfilled its period of service means death; its activity means life. The greater the rapidity of the change within physiological limits the more active and effective the life. The more work is done in muscle, and gland, and brain, the more cell change must take place, and hence will result more rapid circulation and respiration, for the blood must course more energetically to bring new material to the needy tissues, and to carry away the worn-out cells; also the lungs must be more active to eliminate the effete matter brought to them by the blood, and to supply oxygen to be carried to all parts of the body.

These are the simple facts underlying the great physiological law of increase by use and decrease by disuse.

The system of bodily training employed by the Greeks, unguided as it was by any ray of physiological knowledge, accomplished its object empirically. By the observation of results they were ·cted in the selection of the movements which) chosen to form their system of gymnastics. ,y observed that the strength of the body was ·portion to muscular development, and that ılar development was conditioned upon ac- They did not know that every part of our ɔx organism is made up of little cells, every which has its own cycle of existence, and that (generally) strength and vitality are in proportion to the youth of these cells, to the frequency with which they are changed, by shortening their life history, their removal, and replacement by others. They knew nothing of the increase in the circulation of the blood by which the worn-out cells were hurried away to the eliminatory organs, and by which fresh supplies were brought back to build up depleted tissues; nor that these changes occurred with greatest activity in those parts where there was greatest exertion.

They observed that growth and development followed use, and that the energy begotten in the part was in proportion to the energy called for in the exercise. Though they observed that the breath came quicker as the exercise called forth greater effort, yet they could not know that this occurred in order that the lungs might do their share of the work—implied in more rapid cell-changes—by getting rid of the effete materials which were being hurried to them by the ever-moving blood-current, nor that in this very effort the lungs themselves were conforming to the universal law, that increase of power results from increase of effort. Nor could they know that this increased circulation necessitated greater heart activity, and a consequent growth in cardiac power. Though they knew that increased activity was accompanied by increased moisture upon the surface of the body, and that this increased moisture was a means of improving health, and especially of improving the softness, elasticity and complexion of the skin; yet they could not know that this escape of moisture occurred through the blood parting with some of its fluid constituents, and that by an unvarying physical law the heat of the body was thus lowered and impurities removed from the system.

Thus, by observation alone, must they have chosen such exercises as were best adapted to fit their youth for the duties of that day, such as were helpful in individual culture, excellence and distinction. With such a system as was suitable for the strong youth of noble birth, they were well content; no provision was made to help those of unsound constitution and imperfect growth.

Our knowledge of physiology enables us to propose something better. Skill is called into exercise not only in providing for the improvement of those who are well-favored, fleet and healthy, but

for rendering less unhappy and unfortunate those who are the victims of heredity, disease, accident and ignorance. Like all true knowledge, it evinces its divine origin by making the most bountiful provision for those who most need its blessings.

Our need to-day calls not so much for great strength, for power to march great distances, to lift great weights, for the exercise of personal prowess on the field of battle, as for vital capacity, which shall enable each in his place to pursue his calling unflagging and untiring with most comfort to himself, and most good to his fellows. We want not so much the man who can row or walk a mile, or stand in the prize ring more successfully than any other, as we do him who is whole, who is developed all round, fitted alike by the cultivation of his senses and his intellect, of muscle and brain, to do his part, and do it well in life's struggle. There is no position in life where a good sound body with tissues and organs that have attaineed to the high standard to which natural means may bring them, does not fit a man the better for duty, enabling him to bear fatigue, carry life's burdens, and minister to the wants of his fellows.

We who are here to-day have seen men falter and fail in the midst of their work, and we know others—men and women—upon whom the duties of life rest heavily, who run the race of life wearily, though their feet are shod with the purest faith, and their hearts full of the noblest hope, with ambitions leading on to objects most worthy of attainment, and who, even with the goal in view, will falter and fail; and why? All for want of that stamina which would bear up under fatigue, grief, anxiety and work, all because of the casket that was neglected all those years, while the gem of intellect within was being polished and fitted for its high destiny.

It is claimed by some that the varied games and sports to which boys and girls are devoted, especially the out-door sports, are sufficient to give development and healthy tone to the body. Invaluable as these sports are, yet not one of them has for its purpose, nor does it accomplish an educational effect upon any organ or group of muscles. The end in view is success in the game itself, not improvement in the *means* of attaining it. Just as the child whose mind was never directed to other than mental recreation would not be fitted for mental toil, would not call forth the best endowments of head and heart, so mere physical recreation is not all that is needed to build up the best physique. Who among us that has an intelligent, quick-witted boy, would argue that the ordinary mental exercises to which the every-day experiences of life would lead, were sufficient for the education of his mental faculties? Yet, it is as logical to argue that his mental education should be left to nature, and the influences that may chance to touch and mould him, as to contend that the most useful type of physique will result from the physical education which depends upon doing the acts and following the games prompted by inclination.

The development from such causes is likely to be unsymmetrical, because the child will pursue those sports in which he excels. Cricket will develop the legs and the right arm, sculling, the legs and loins, and so of the entire list of sports—partial development is the result. Nearly all our games allot the larger portion of the work to the lower limbs and the right arm, and hence the left arm, shoulder and side of the chest are not developed so well as those ot the right. If this marked the whole evil then the fact would not be of so great importance. The chest walls are chiefly dependent upon the arms for the exercises which develop them, and the condition of the heart and lungs is largely dependent upon the chest cavity and the mobility of its walls.

It is not too much to say that no resource which is available could do more to lessen the large number of deaths which occur among us from disease of the heart and lungs, than such systematic culture in childhood and youth as would give these important organs as much chance for development as is now given to the lower limbs. Except as the result of disease or accident, the lower limbs are but seldom faulty in growth, but in every community many are found whose development of body is not the same on both sides. Exercise which is mere recreation is not adequate to p duce uniform and harmonious development, l cause the employment of the groups of muscles partial, not general, some being called frequen into action, others seldom or never; and the ph siological law is sure, that where there is activ there will be growth. In this partial devel ment it is not to be forgotten that the parts r

lected are those whose well-being is most essential to beauty of form, and a high standard of health.

One reason why the value of systematized physical exercise is lost sight of is, because its benefits are so often supposed to be limited to the development of muscle; its vast influence upon the nervous system, and upon the processes of respiration, circulation and nutrition are but little appreciated. No muscle can contract without the co-operation of the nervous system. If the arms are moved in obedience to the word of command, we have first the impression made upon the ear, then its conveyance to the brain, where it is grasped by the mind, and the will's mandate goes forth along the nerves to the muscles required to make the movement called for, and lastly the contraction of the muscles. In all such exercise calling into play, impartially, the muscles of all parts of the body demanding implicit and immediate obedience, and producing movements the most graceful that can be designed, there cannot fail to come to the boy or girl, greater acuteness of perception, rapidity of action and prompt power of execution. Not least to be prized is the habit of prompt obedience to command.

(*To be continued.*)

REFLEX NERVOUS PHENOMENA, DUE TO PREPUTIAL CONTRACTIONS.*

BY R. W. BRUCE SMITH, M.D., C.M., SEAFORTH, ONT.

The object of this paper is to briefly relate a few cases coming under my own observation of nervous irritability in childhood, arising as a result of narrow prepuce accompanied by preputial adhesions.

Case I—W. R., a male child, aged five months, of healthy parents and with all the appearance of a robust infant. The father came to my office several times complaining that the child almost constantly crying and without any rent cause. Thinking this might be, as is monly the case in infants, the result of indi- ion I prescribed a peptonic mixture with a nide elixir. This, however, failed to give the -d relief, and I was requested to see the patient the following day. I found that during the previous night, and for several days and nights, the child had cried a great deal, so that at that time he was in a highly nervous condition, and with a slightly increased temperature. The bowels were not constipated, and nourishment had been regularly partaken of until the evening previous to my visit. The mother informed me that nearly three weeks before she had noticed the child growing fretful and during the past few days his crying had become distressing. There was marked evidence of nervous prostration, trembling of the eyelids and convulsive movement of the limbs so that I was at first puzzled to account for the symptons. Having the idea that this might be a case of phimosis, I examined the penis but failed to find the preputial elongation generally met with in that condition. I discovered, however, a pin-hole orifice into which I introduced a small probe, and commenced to slowly dilate. I soon found that adhesions existed between the prepuce and the glans penis, and to break down these passed a director several times slowly around the gland before introducing a small forceps to more fully dilate the prepuce and expose the gland. Making a small slit in the prepuce I succeeded in exposing the corona glandis, behind and pressing upon which, I found a small roll of subaceous matter shaped like a small string and extending more than half way around the penis. I removed this and after cleansing the parts applied a dressing of vaseline and iodoform. The result was very gratifying, for on calling next day, I was told the child had rested well the previous night aad had slept nearly the whole day. I directed the parent to see that the gland was kept perfectly clean and to ascertain every day that the prepuce was freely movable. It is now over eight months since I visited the child who has had no return of the symptoms mentioned, and who has since that time developed very satisfactorily.

Case II—Jas. G., a male child aged eight months, the son of parents of good constitution, brought to my office by his mother who informed me that for four or five weeks the child had been exceedingly fretful and at times seemed to have great difficulty in passing urine. She said she had noticed the child become more or less fretful during micturition since he was three months old but she could never understand the cause. Being

* ad before the Ontario Medical Association, June,

struck with the peculiar resemblance of this to the previous case occurring only a few weeks before, I examined the penis and found there a solution for the difficulty. While the child was held firmly by the mother and another lady who happened to be present, I drew forward the prepuce and inserted the point of a small forceps into the pin-hole orifice and commenced gradual dilatation. The day following I repeated this procedure and was able to draw the prepuce back beyond the glans where I found a bean-shaped mass of cheesy consistence which had caused considerable local irritation. After removing this and applying a mild astringent dressing the child did well and was completely relieved of both the fretfulness and the dysuria. The mother has reported to me that there has been no return of the symptoms complained of.

Case III—Geo. F., a bright little boy aged three and a half years, born of healthy parents, whose five other children had been healthy from birth. This child had been more fretful than the other children during the first year, but nothing serious had been apprehended until the child had passed the eighteenth month and showed no inclination to walk. About this time he had several convulsions at short intervals and the parents were informed that these attacks had so weakened him that his inability to walk could be thus accounted for. At the age of three years he could scarcely stand alone and was unable to walk without support, and at every step one knee rubbed against the other. The muscles of the legs did not appear at all wasted but the adductors were more than usually rigid to the touch. I have here to confess that I at first considered this an ordinary case of general debility, and thought the parents had been too urgent in their desires to see the child walking and that the weak knees followed as a result of this indiscretion. I accordingly prescribed an emulsion of cod-liver oil, generous nourishment, and tried massage for some time without any appreciable result. The parents became discouraged and discontinued all treatment. Having again an opportunity to see the child I made a careful examination of the penis and found an elongated prepuce, and obtained the reluctant consent of the parents for the simple operation I at once performed. Passing a probe into the narrow orifice and pushing it gently back between the glans and the prepuce, I found the latter in several places so closely connected with the former by adhesions that separation was by no means an easy task. This was accomplished by introducing a grooved director as a guide to a bistoury and then dividing the contracted tissue sufficiently to uncover the glans, behind the corona of which was found a soft chalky-like mass. This was moulded into the shape of a half ring, and by pressure had given an abnormal hardness to the surrounding tissue. After thoroughly cleansing the parts I applied cold water dressings and ordered these to be renewed at frequent intervals for the first twelve hours and afterwards applied iodoform and vaseline. In about a fortnight there was marked evidence of improvement, and although it was some time before he had good use of his limbs he has since progressed favorably. At the end of four months he was able to run about with the other children. I am convinced that this was a case where genital irritation was the cause of perplexing and most unpleasant reflex symptoms.

I have thus briefly alluded to these cases coming under my own observation, in which I feel justified in asserting, that the causative relation of a narrow and contracted prepuce and preputial adhesions to the symptoms were most apparent, as the result of treatment proved. While we are well aware, than an attempt to relieve a nervous disturbance due to some organic lesion in the brain or nervous system, by an operation on the genital organs would be utterly unjustifiable, there can be no doubt that in children we sometimes, and perhaps more frequently than we are aware of, meet with reflex symptoms arising from some abnormal condition of the genitals. The explanation is by no means difficult. We are all familiar with the reflex symptoms due to dental, gastric and uterine disturbances and knowing that no nerves in the human system are so excitable as those supplying the genital organs, we can readily account for the disturbance created by an irritant to this sensitive region. That these reflex symptoms are not ways present when the glans is compressed, c not be considered as an argument against existence of such a cause, for, do we not frequen hear of depressed fracture of the skull accompan by no serious results? but this does not prove s an injury to be harmless.

Mr. Edmund Owen, surgeon to the Hospital

Sick Children (London), says in his work on surgical diseases of children, "Perhaps the commonest cause of hernia is a small preputial or urethral orifice, and next to that I would put the smegma-hiding or adherent prepuce."

Bryant says, "in fifty cases of congenital phimosis, thirty-one had hernia, five had double inguinal hernia, and many had umbilical hernia besides. In no one was the hernia congenital, its earliest occurence being at three weeks. Circumcision was performed in these cases and all were much benefited."

One word regarding the very simple operation for the relief of these cases. The operation of circumcision need not be resorted to when the patient is very young, for the testimony of Sayre in America, and Nélaton and Saint Germain in Europe, favor preputial dilatation by the introduction into the orifice of a simple dilator with two branches, and following this by gradually separating any existing adhesions by the aid of a simple probe or grooved director. Some American writers, however, seem to thoroughly believe in the Mosaic Law, not only from a moral, but also from a sanitary standpoint and recommend the radical course of circumcision in all suspected cases.

In presenting this subject to this meeting, I shall not attempt to formulate any conclusions other than those to which I have briefly made reference, in directing the attention of those present to a subject upon which text books say so little. I have merely desired to draw attention to the fact, that in some cases, with marked nervous symptoms, we may find a causative relation to those symptoms in an abnormal condition of the penis, and by directing our efforts to relieve that condition, may, perchance, convert a feeble, puny, wakeful and irritable boy into a healthful and happy child.

CLINIC BY WILLIAM PEPPER, M.D.

Prof. of Medicine, University Hospital, Philadelphia.

CASE. Woman with multiple cardiac lesions, ..icated with serious intra-abdominal trouble; ..bly due to paracentesis. The paracentesis ›wed by a change in the ratio of white cor-·les to red. (Reported by Dr. J. Howe Adams).

I have presented to our notice this morning, ·se of a woman, æt. 26, married, one child, ·h a family history of rheumatism. She has had the articular form of this trouble herself. This was followed by endocarditis, reducing her to the condition in which we see her at present. She is short of breath, her belly is swollen and she presents an extreme degree of emaciation. She has been tapped ten times since the 1st of May of this year. The liquid which then escaped was of a clear yellowish color, closely like that of healthy urine; while now we see in this specimen which is from the last tapping, a turbi-red fluid of a specific gravity of 1010, in which is floating a pseudo-membranous matter, which will probably prove of importance in diagnosis. Serum which is drawn off in a tapping may at first be clear and of good color, but often on being allowed to stand, especially if in a high cylindrical vessel, it throws down a film like a beautiful veil. This is coagulated fibrin, but not necessarily of inflammatory origin; it is not always right to suspect a peritonitis; it may be due simply to venous obstruction. If, however, the liquor drawn off is turbid, bloody and flocculent, then there is more reason to believe that there is something added to the simple venous congestion.

In tapping one case, a number of years ago, I noticed that the fluid running through the canula, which at first was quite a good straw color, began to grow rather bloody, until it ran as pure blood-color as if I had opened some great vessel; it was anything but reassuring, I can assure you, especially as the case was one of an old colleague who had intrusted himself to me, and I was then quite a young man. It was rather astounding, for I felt sure there could be no vessels within eight or ten inches of the point of tapping; however, the case recovered without apparent loss of more blood or strength, and I regard it now as a rather excessive breaking of over-congested capillaries when the intra-abdominal pressure was removed.

Curiously enough, the only prominent place in which the dropsy appears in this case, now is in the abdomen; the legs were dropsical at one time, but by treatment it has disappeared, leaving them cyanotic and erythematous, while it has repeatedly done so in the belly. The two facts, the appearance of the sernm and the presence of ascites, with no dropsy elsewhere, lead us to believe that there is something added to the heart trouble.

On inspection, we note the extreme emaciation

of the patient. Cyanosis is most marked, running up the arm to the elbow. There is a throb in the cervical vessels, which may be due to the pulsation of the carotid artery, causing the jugular to rise and fall. Look out for this point in all your inspections, for it will make great difference whether the blood is dammed back from a weakened tricuspid valve, or is giving the pulsation from the carotid simply. There is probably a triple lesion; a mitral stenosis, an aortic thickening, and a tricuspid inefficiency. The current in the superficial abdominal vessels in the upper abdominal zone should run up to empty the blood into the subclavian vein, but we see by pressing the veins at different points that the current is in reality downwards as if to reileve the congestion above. The liver does not extend below the margin of the ribs and runs up to about its accustomed limits above; from the extent of the cardiac lesion a much greater size might very reasonably be expected. The way to determine the exact margin of the liver is to use quick pushes rather than by slow careful feeling. In abdominal dropsy in the female it is never safe to omit examination into the possibility of the existence of an ovarian tumor; although in this case, there is nothing which points towards it, ovarian liquor being, as you know, a dirty viscid in character. On turning the patient on her side we find that the resonance which we noted in her inguinal region still remains; it is of that curious quality produced by the mixture of wind and water. This shows that the liquid is not free to move; hence it is not common ascites. We must now see if her pelvic cavity is encroached upon; this determination we will ask Dr. Goodell to make. If it is not ovarian, it can be one other thing, that is, chronic peritonitis of some sort, which has matted together the bowels by bands of adhesions. There are three great causes of chronic peritonitis: syphilis, malignant growths, and tuberculosis. There is no evidence of pulmonary trouble and tubercular processes are rather rare with heart disease. She is entirely free from fever. She is almost too young for malignant disease and there is no trace of specfic trouble. Sometimes repeated tappings may set up a low grade of inflammation, and hence produce the chronic peritonitis, due either to unclean instruments or other causes, which it may be quite impossible to avoid.

At a subsequent date, careful physical exploration showed no evidence of uterine or ovarian disease. The peritoneal cavity quickly filled and she was tapped three times at intervals of three weeks. A paper read before the County Medical Society, by Dr. Guiteras, the new Professor of Pathology at the University of Pennsylvania, in which he stated that in four cases of abdominal dropsy he had noted an increase in the number of white corpuscles in proportion to the red, following paracentesis, suggested the determination of the ratio in this case. Dr. Judson Daland, who is making an exhaustive examination of this reported phenomena, kindly furnishes the following report of this case:—"The examination of the blood showed that the red and white corpuscles were normal in color and contour. The red blood corpuscles were variable in size; some of them were quite large. Repeated observations before the last tapping gave the following results: 3,275,000 red corpuscles and 14,285 white corpsucles; immediately after tapping 3,425,000 red corpuscles and 35,000 white corpuscles. It is evident from the observations that the white corpuscles are present in increased quantities, namely, 20,715 more, *immediately* after the evacuation of the peritoneal effusion while the red blood corpuscles remained practically the same in number. The count of the white corpuscles was made with care, and repeated many times. Not less than 112 squares were enumerated before a decision as to the number of white corpuscles to the cubic millimetre was reached. It is as yet too early to deduce any conclusions from this apparent phenomenon, and I will make extensive observations in a large range of cases before attempting to reach any explanatory theory."

Correspondence.

OUR EDINBURGH LETTER.

(From Our Own Correspondent.)

The Treatment of Varicose Veins at the Edinburgh Royal Infirmary.

Mild cases are treated by the palliative plan; rest, elevation, the application of a Martin's bandage, or the elastic stocking. In the more severe cases this palliative treatment fails to give relief;

then one of two operations is performed for the radical cure.

If only a small number of the veins are varicose, an incision is made parallel to the affected veins, which are then carefully dissected out, and a ligature applied above and below. Several inches or even feet of the affected veins may be dissected out in this way, and if only a limited number of veins are involved, this will be all that is required to effect a permanent cure. After the veins are removed the parts are sutured together, treated as any other incised wound, and union by the first intention sought.

This plan of treatment is limited of course to those cases in which only a few veins are affected, and could not be applied to those so frequently met with, where nearly all the superficial veins and perhaps the deep also are in a varicose condition.

Dr. P. H. Maclaren has introduced an operation for such cases as these, which has been very successful in his hands. His attention was first directed to the radical cure of varicose veins of the scrotum. In these cases he found there was a great redundancy of tissue, and he believed the varicosity to be due to the relaxed tissues not being able to give the veins the support they required. He therefore excised a portion of the scrotum in these cases, and found that, after the operation, the veins received the necessary amount of support and a permanent cure was the result.

The operation as performed by Dr. Maclaren for varicocele is as follows: The parts are shaved and rendered aseptic. The patient being anæsthetized, an assistant grasps the scrotum above and below on the side to be operated upon and draws the tissues well out. The amount of tissue to be removed is then fixed upon and the two layers of scrotum thus drawn out are transfixed at the upper part by a long needle, which is then pushed alternately backwards and forwards through the anterior and posterior layers of the scrotum until the lower part is reached, as is indicated in Fig. 1.

tissues are now divided about one-fourth of
·h external to the needle; the two edges of
rotum are sutured with horsehair, and, after
bleeding vessels have been tied, dressed anti-
·ally and union by first intention sought.
·eedle is not withdrawn until the third or
day. The great benefits to be derived from using the needle is that the dartos is kept at rest and union by the first intention results.

After operating with success on a number of these cases, he applied similar treatment in cases of varicose veins of the lower extremities. He found that in varicose conditions of the leg, the skin and superficial tissues were very redundant, and that after the removal of a portion of this redundant tissue, the veins were supported and a radical cure was the result.

He has operated on a great number of these cases, with what might be called perfect results, even in the most chronic cases. One patient who has been treated by this operation has been under observation for over ten months. Before the operation the man was unable to follow any employment, on account of the pain and discomfort caused by the varicose condition of the veins of both legs. Since the operation he has not only been free from pain, but has pursued his former avocation without the slightest discomfort or any sign of the varicosity existing.

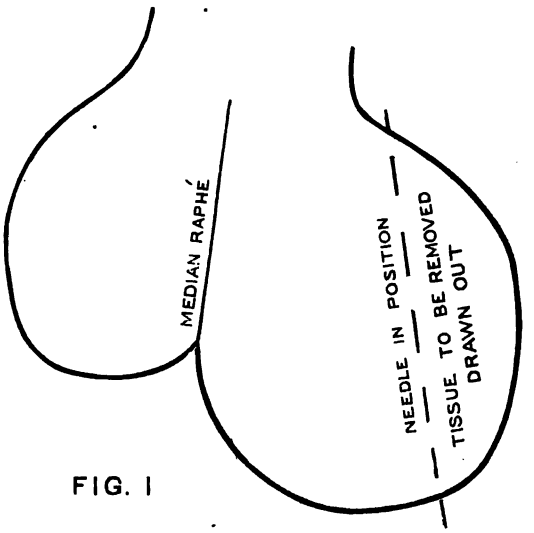

FIG. 1

The operation as performed by Dr. Maclaren for varicose veins of the leg is as follows: The part usually operated upon is the posterior aspect of the leg, over the gastrocnemius muscle. The parts having been rendered aseptic and the patient anæsthetized, the operator pulls the redundant tissue well forwards and marks on the skin the amount to be removed. An elliptical incision is then made over the part thus marked out, as seen in Fig. 2. He cuts right down to the deep fascia and rapidly

dissects off the part, tying all bleeding vessels as he proceeds. After seeing that the surface left is absolutely dry, he inserts horsehair sutures, very close together, beginning from above and draws the edges of the wound together. The edges are easily approximated if the assistant firmly presses the deeper tissues out of the way with his fore-finger as each suture is tied. The sutures before being tied are represented in Fig. 2.

If at any place the two skin surfaces cannot be drawn together by means of the horsehair suture, he uses silver wire and the button suture to coapt the parts. The wound is then dressed with powdered boracic acid, protective, an abundance of

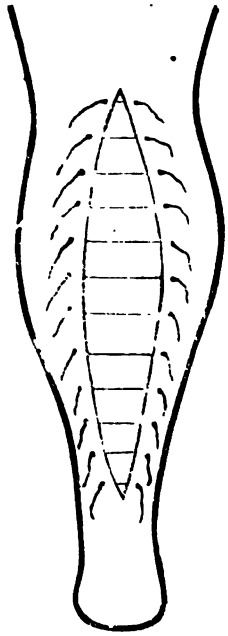

FIG. 2

antiseptic wool, and a gauze bandage tightly applied. The leg is then to be kept at absolute rest until union by first intention has taken place. An anterior splint is therefore applied, which reaches above the knee and below the ankle. The splint is applied to the leg by bandage carried around the ankle, knee and thigh only; not continuing the bandage over the wound. The leg is then elevated, swung to a cradle, and the parts kept at perfect rest for from eight to twelve days, when the sutures are removed, and if union by first intention has taken place, only a linear cicatrix marks the position of the wound.

The two main points in the treatment are, to excise the proper amount of tissue in each case, and to get union of the parts by first intention.

G.

Selected Articles.

THE CURE OF HÆMORRHOIDS BY EXCISION AND CLOSURE WITH THE BURIED ANIMAL SUTURE.

In his paper on this subject Dr. H. O. Marcy, of Boston, said that the recent discussion of the surgical treatment of hæmorrhoids, published in the N. Y. *Med. Jour.*, evoked by a late paper of Mr. Whitehead's, of Manchester, England, had been both timely and interesting. The medication of wounds, and treatment based upon aseptic measures, marked the present as an era of surgical evolution, to which surgery of the rectum should be no exception. Few of the minor surgical diseases caused so much suffering, and gave to the general practitioner such constant repetition of complaints as those of the rectum, and, in return for services rendered, no class of patients were more appreciative and grateful. The teachings of the text-books, with few exceptions, offered very little improvement upon the methods of the past in the treatment of the disease of the rectum. The advocates of the ligature perhaps equalled those who claimed superior advantages to be derived from the use of the clamp and the cautery. Although a practical cure was often obtained from the use of either, he could not but believe that both were surgically defective and should be relegated to history. While it might be conceded that the general practitioner was in a large majority of cases familiar with the pathological conditions pertaining to the hæmorrhoidal diseases, still it might be well to be reminded that the blood was carried with the arterial impulse directly to the part through short branching vessels, and in turn received from the capilliaries into an extraordinary net-work of veins, which emptied through the inferior mesenteric into the portal system. These veins were entirely without valves. Boerhaave and Morgagni had pointed out these anatomical peculiarities, and remarked upon the horizontal position in the lower animals, which thereby took off the superincumbent weight of the blood column. They adduced this as a reason why quadrupeds were not subject to diseases of this nature. He took pleasure in calling attention to a most interesting and learned article on the subject by Dr. Bodenhamer (N. Y. *Med. Jour.*, Jan. 12, 1889, p. 39). It seemed, however, a just criticism that the weight of the venous column

alone acted only in a very subordinate degree as a predisposing cause, although manifestly an important factor after the blood-current becomes gradually retarded in the oftentimes enormously dilated hæmorrhoidal veins.

Were the cause to be found in this peculiar distribution of the portal circulation, the upright position of man would make this condition the rule instead of the exception, and it would be extraordinary to find the varicosities limited to the hæmorrhoidal plexuses and lying almost entirely external to the sphincter muscle. Oftentimes, however, after the pathological conditions became well established, the current through the elastic vessels was so greatly retarded by the weight of the blood-column in the erect position that most patients learned to seek relief by change of posture. Anatomists emphasized the fact that in the normal condition many of the hæmorrhoidal veins were of comparatively large size. In relation to the surrounding pelvic organs these veins occupied a dependent position, and their only support was derived from a loose network of connective tissue. It would be apparent, then, that the anatomy of these thin-walled vessels, their relation to the surrounding parts, and their physiological function, furnished, as it were, a predisposing cause of disease. To this, however, probably might be added a certain condition of weak circulation so often found in persons with thin-walled veins of the lower extremities. It had long been recognized that the varicosities of the hæmorrhoidal vessels, which were probably wanting in the lower animals, and were comparatively rare in the savage races, became a more and more constant factor in the sedentary occupations of modern civilization. A great variety of pelvic diseases in the female and the genito-urinary diseases in the male, complicated with constriction, were active causes of rectal disease. The rectum might be regarded as a convenient cess-pool for the reception of the waste and *débris* of the alimentary canal, which poured into it in a more or less fluid state. The curves of the lower bowel, from the sigmoid flexure downward, were an evident design, in part at least, to vary the support of the weight of the column, and admirably adapted to equalize the pressure. When the rectal contents remained sufficiently soft to produce equable pressure, the circulation was comparatively little disturbed, and defecation was accomplished with very little muscular strain.

however, there should be retention of the con-
ıts, with absorption of the fluid portion going
until the molding process became difficult, the
verse would be true. The overloaded rectum
oduced pressure upon the venous return current,
sing a train of reflex nervous symptoms, and
hyperæsthetic state followed. Although the
hological condition above described produced
the larger part of the suffering ascribed to

so-called "piles," we must not forget that there were other diseased conditions which might be confounded therewith. Small fleshy masses about the folds of the anus, sometimes called condylomata, were very easy to distinguish. These had nothing to do with the hæmorrhoidal veins or mucous membrane, and might be the result of friction or erosion arising from a variety of causes. The so-called villous tumor of the rectum was, however, of sufficient frequency to be taken into consideration. It was not unlike the villous growths of the bladder or other mucous surfaces. This extra vascularity only revealed its presence because of the hæmorrhage, and was apt to be diagnosticated as a bleeding pile. The soft mucous polypus of the rectum was an adenomatous structure of close relationship to the villous growth, and was sufficiently often the cause of suffering to be borne in mind.

Mr. Whitehead, of Manchester, had emphasized the pathological conditions upon which the author had touched, and insisted that the extraordinary dilatation which the veins often underwent could only be learned by dissection upon the living subject. The author's own attention had been called to the condition many years ago when he found how very commonly the veins of the rectum became enormously dilated in a female who had suffered laceration of the perinæum. It was probable that the changes incident upon retention of the rectal contents and other causes acted to bring about dilatation of the vessels rather than the superincumbent weight of the portal column of blood. When the venous plexus of hæmorrhoidal vessels had become pronouncedly varicosed, they had as a covering the lax submucous tissue of the rectum close to the anus, and when put on tension were protruded as a ring of transverse rugæ around the anal aperture. Certain of the rugæ were developed into rounded protuberances, and sometimes even into fungoid tumors of considerable size. The veins sometimes ruptured into the connective tissue, and changes followed which resulted in tumors of various sizes, color and density, called "external piles." The strain in defecation or gentle pressure by the finger from above downward would frequently cause soft, fleshy, exquisitely sensitive grape-like masses to protrude—"internal piles." The mucous membrane covering these would frequently be found congested and abraded so that more or less continuous hæmorrhage ensued.

The method for the cure of hæmorrhoids by the use of the ligature applied with slight modifications of detail had been considered the safest, surest, and most manageable procedure. The projecting tumors, having been well drawn down, were usually transfixed with a curved needle, armed with a double ligature; this being tied firmly, a portion of the constricted mass was ex-

cised. In this way all the hæmorrhoidal tumors were ligated and the mass was then returned within the sphincter. This was the favorite operation of the late Dr. Van Buren and his followers, and had at present in Mr. Allingham, the famous English surgeon, its most distinguished advocate. The use of the ligature, applied to cause necrosis of tissue and then allowed to remain in the wound, was open to the same general objections which had caused its abandonment. When applied in this manner to the constriction of the large vessels, sloughing necessarily supervened, which meant an infected wound, exposing the patient to the same dangers, although, perhaps, of less degree, as infection in any other part of the body.

That this was not hypothetical criticism the writer thought there was abundant proof. The stoutest advocates of the ligature admitted that abscesses, general septic poisoning, and other dangers, as secondary hæmorrhage, were not wanting in the experience of the most careful and practical surgeons. The use of the clamp and cautery came into vogue and had been specially popularized by the distinguished surgeon, Mr. H. Smith, of London. This procedure the author had early adopted in his own work. It had advantages over the ligature in that the primary wound was aseptic. Then by the time that the slough was ready for separation, the subjacent tissues would be fairly well protected by the abundant proliferation of granulating tissue. In his own experience, the suffering caused by the burning was objectionable, while all wounds caused by burning were invariably slow of repair. He was of the opinion that the results obtained from the use of the cautery were generally of a more satisfactory character than from the ligature. Secondary hæmorrhages were reported to have occurred, and it was claimed that contraction was not uncommon after cauterization. It might be accepted as a fact that the use of the cautery, except in certain conditions in uterine cancer, had been relegated to the past. Even here it found fewer advocates than formerly. Certainly bleeding was to be controlled without its use, and it might be questioned whether deep burning was safer than deep cutting in any disease. Then various crushing instruments had been devised, to be used, however, with or without the ligature, for the purpose of producing more rapid necrosis of the tissue involved. The advantage alleged for the operation of crushing was an avoidance of hæmorrhage, but, on the other hand, some operators reported that hæmorrhage had followed crushing. Theoretically this method seemed to offer little, if any, advantage over the ligature, therefore he had discarded it without trial. There remained something to be said of the cure of hæmorrhoids by the chemical action of certain medicaments injected into the parts. Few of the modern methods had received more speedy attention than this, the so-called "carbolic acid treatment of piles." It had much to warrant its acceptance. Carbolic acid of itself was at that time believed to be the chief of antiseptics, rapidly coagulating the blood and the albuminoids. It had been variously combined with morphine, cocaine, etc., and little pain had followed its use, and patients and physicians had been alike enthusiastic. At present, however, it appeared that the consensus of surgical opinion was that the result was in a large degree disappointing. When a considerable proportion of acid was used, causing necrosis of tissue, no matter how carefully injected, the tissues not infrequently which it was desirable to remove, failed to be acted on, while those which should have been retained were destroyed by sloughing. The explanation was that the fluid introduced into the loose margin of the connective tissue escaped to the extraneous parts. When weaker proportions were used, even after many repetitions of the injections, the hæmorrhoidal vessels remained comparatively unchanged The method of cure by injection was also sometimes objectionable and even dangerous. The writer had seen a young and healthy man made seriously ill, with considerable fever and general septic poisoning supervening upon the injection of hæmorrhoids at the hands of one of our most capable men. The connective tissue around the anus remained for some days œdematous, reddened, and painful. There now remained for discussion the operation of Mr. Whitehead, of cure by excision. This the author of the paper did not hesitate to accept as a step in advance of all surgical procedures previously discussed. It had been demonstrated that the vessels were frequently so deformed as to fail entirely in the original purpose for which they were designed, and the end sought to be obtained by all previous methods had been their destruction and removal. The real objection to destruction had been the fear of hæmorrhage, and, as a means to obviate this, the ligature and clamp and the cautery were devised. Mr. Whitehead had clearly shown that his method of dissection was safe, that the hæmorrhage was was not excessive, and that a rapid cure resulted. The method was certainly scientific. By a clean dissection the parts which it was desirable to eliminate were removed. The free edges of the divided tissues were then stitched together, primary union generally resulting. Mr. Whitehead's method was best given in his own words:

"By the use of scissors and dissecting forceps the mucous membrane is divided at its junction with the skin around the entire circumference of the bowel, every irregularity of the skin being carefully followed. The vessels are then exposed by a rapid dissection of the mucous membrane, and the attached hæmorrhoids, thus separated from the submucous bed on which they rest, are

pulled bodily down. Each individual point is brought below the margin of the skin. The mucous membrane below the hæmorrhoids is now divided transversely in successive stages, and the free margin and the severed margin above are stitched, as soon as divided, to the free margin of the skin below by a suitable number of sutures. The complete ring of pile-bearing mucous membrane is thus removed." Mr. Whitehead very wisely emphasized thoroughly paralyzing the sphincters by digital stretching. The bleeding vessels, which were small and easily seized, were immediately twisted upon division. The sutures were interrupted and of braided silk. Mr. Whitehead's operation had been, of course, variously criticised, but, as that gentleman could refer to a record of some three hundred cases in which the operation had been, "to the best of his knowledge and belief," a perfect and permanent cure, there was enough upon which to base a conclusion. Some ten years ago Dr. Marcy said he had operated in two cases of prolapse of the rectum by first, before resection, entirely encircling the prolapsed part upon a row of continuous double sutures. From the excellent results following these operations he had been led to apply the same method to the base of a ring of hæmorrhoidal vessels before resection. For some years this method of suturing had entirely superseded all others in his practice, and had been repeatedly demonstrated to members of the profession. He now offered his method for consideration on account of its great safety and excellent result, as presenting advantages in the treatment of a troublesome affection. Care should be taken previous to the operation to have the large intestines thoroughly emptied, usually by an active cathartic, supplemented by a copious injection given a few hours before the operation. The patient was to be placed in the lithotomy position, the limbs suitably supported, and the parts to be thoroughly cleansed by a sublimate solution as usual. The digital dilatation of the sphincter was carefully made until the muscle was paralysed. The rectum was then washed with sublimate solution, care being taken that none of it was allowed to remain. A pledget of wool, into which iodoform was to be freely dusted, was passed into the rectum, and the subsequent stages of the operation were carried out under irrigation with sublimate solution.

ıg the line of the junction of the mucous mem-
ne with the skin, either with a knife or scissors,
sion was made from a central line, posteriorly,
ı below upward on both sides of the median
above. With a little care this division could
nade without injury to the plexus of vessels.
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rated by the finger or a blunt instrument,
ing any connective-tissue bands which might
The mucous membrane above the plexus should be then divided transversely in a somewhat similar manner. The deformed hæmorrhoidal plexus was then separated from its surroundings except at its base. The needle, with eye at point, threaded with tendon, was carried posteriorly behind the mass, unthreaded, and rethreaded with the opposite end and withdrawn, the stitch resembling that taken by the shoemaker, drawing the waxed end of his thread in opposite directions through the hole made with the awl. In this way the entire base was encircled by a line of deep double continuous sutures. This was the stitch the author had for many years used in the coaptation of deep parts by the buried suture—as, for example, in rupture of the perinæum and constricting pedicles of abdominal tumors. In this way it was impossible for any tissue to escape. The stitches were not to be drawn too tight, since they were intended merely to control hæmorrhage and not to produce necrosis of the parts they inclosed. Then with scissors the hæmorrhoidal plexus, just above the line of sutures, was to be dissected away; the mucous membrane to be then stitched by continuous suture to the line of division, either with an over-and-over stitch or with a running blind stitch taken from side to side from within outward. The paper concluded with a description of the usual dressings and after-treatment. If the operation was properly done, it was generally followed by primary union. The patient was remarkably free from pain, and the process went on without trouble. The patient need not keep his bed. The bowels should be moved the third or fourth day. By the method above described the author constricted the blood vessels before division, insuring a much more accurate readjustment and closure of the parts, while the buried animal sutures manifestly presented advantages over interrupted silk sutures, which latter must be thrown off by suppuration.—*New York Med. Jour.*

SIMPLIFIED WATER ANALYSIS.

Dr. Theodore Deecke, special pathologist at the New York State Lunatic Asylum at Utica, has kindly sent us the following corrected copy of a published interview with him in a recent issue of the Utica *Herald*. He said:

"It is a fact that the various processes by which, for hygienic purposes, the organic matter in drinking water may be estimated are still imperfect, and that not one of those generally employed can be considered to justify the claim of absolute value for its results. If in any case every one of the processes is resorted to, the analyst probably may come to definite conclusions whether the water is to be condemned or not, whether or not the organic substances discovered therein are

harmless or hurtful to the human system. Where this is not done, the conclusions are of doubtful value, and the opinion is formed more from the general condition and character of the water than from the special reactions and behaviour of its organic constituents. For this reason, a new and very simple process for determining the nature of organic impurities in water may be perhaps not unwelcome. The only really dangerous contamination of waters of wells and reservoirs—which in this connection come more especially into consideration than the running waters—when they are not otherwise exposed to specific pollution from manufacturing establishments, is their pollution with privy and sewage material. In both there is present such decomposing animal and vegetable refuse as, on one hand, which constitutes the very nidus for the growth and thriving of germs of infectious diseases, and, on the other, is liable to produce organic poisonous compounds in the form of organic alkaloids or acids belonging to the aromatic and fatty series, or both combined.

"The presence of the former, of germs of infectious and infective diseases, can be ascertained by the microscope only, either by examining the deposits directly formed in the water, or by examining microbic cultures made on the well-known organic media, with the deposit retained by the filtration of the water through cotton filters.

"The organic alkaloids, when present even in considerable quantity, cannot be detected either by odor or taste or in visible state as crystalline or amorphous matter, or directly by chemical reactions. The aromatic and fatty compounds and acids may be perceived by smell or taste, but are generally present in such small quantity only that they escape detection without resorting to other means.

"I have used for these latter purposes, in my analyses of well and other waters in this city and from other places for a number of years, the following process, which is the same in substance with the one employed for the detection of organic poisons in organic material and tissues, and which, indeed, gives the most satisfactory results :

"Two to four quarts of the water to be tested will generally suffice. One half is rendered alkaline by adding a small quantity of soda or potassa, the other acidulated by a little suphuric acid. Both samples, well corked, are digested for an hour or two at a temperature not exceeding one hundred to one hundred and ten degrees Fahrenheit. After cooling, the fluids are shaken thoroughly and repeatedly with a proper amount of pure ether. After complete separation of the liquid from the ether, which then has dissolved from the water almost all of the liberated alkaloids, volatile, aromatic or fatty compounds, if such had been present in the sample, the ethereal solution is removed from its surface. It is filtered into a small flask, and the ether carefully distilled off at a temperature not quite reaching its boiling point. The residue is preserved for further examination. One half of the ethereal solution may also be distilled mixed, or another mixed ethereal extract be prepared from one or two quarts of the water if it is deemed necessary.

"The residue in the flask is left exposed to the air until the last traces of ether have evaporated. It is then dried over calcium chloride, when it will be found to be either of an essential oily nature or transformed into a crystalline or amorphous mass, or to consist of a mixture of the three.

"Now in any case where there existed a privy or sewage contamination of the water, this will be rendered at once perceptible in the residue by its odor, which, in the concentrated form of volatile and aromatic compounds, is very characterstic of its source and cannot be mistaken.

"The residue in most cases is of a mixed nature, and by proper manipulations one may succeed in separating the crystallizable and amorphous substances from the oily or volatile ones for further microscopical and chemical investigation, and occasionally may get one or the other characteristic reaction. If, however, a few quarts of water only have been handled, the quantity of the residue is too small in general to permit of the determination of the chemical nature of the alkaloids, acids, or volatile compounds present. This must be left to further investigations by handling large quantities of such contaminated waters, which, on account of my at present limited laboratory facilities, I have not been enabled to carry out.

"Yet successful experiments have been made occasionally during the last seven years, for the purpose of examining the action of these substances upon the animal system by injecting watery or alcoholic solutions of the same into the blood of warm-blooded animals, as mice, birds, and rabbits. It was found that some of these compounds act as most virulent poisons. A few cases may be mentioned here. In one case the ethereal extract was from a well-water in the eastern part of this city, near the streets not provided with sewers. The well was located on premises occupied by a family of nine persons, of whom eight at the time had been suffering for weeks from a severe attack of malarial-fever, which, in two of the cases, had assumed a typhoid character. A few drops of watery solution of the mixed extract injected into a rabbit weighing two pounds and eleven ounces, killed the animal within half an hour. In another case, where a rabbit of about the same weight was killed within two hours and a mouse in eleven minutes, the extract was from the water of a well on a farm situated not far from a barn in which cows and horses were kept, and a heap of manure On the farm at the time was a local epidemic of typhoid-fever, with two deaths—a fact which led

to the examination of the water. The ethereal extract in this case contained, besides crystallizable alkaloids, fatty acids, and volatile aromatic compounds, a remarkable quantity of benzoic acid.

"In a third case the extract was from the water of an at times stagnant pool on a meadow once used as a pasture for cows, but which had been suspected to contain some poisonous weed, for at several times heads of cattle pasturing on it had died suddenly and mysteriously. A few drops of the mixed watery solution injected into a rabbit killed it within twenty minutes. The meadow in question is located about a quarter of a mile beyond the city limits, surrounded by farms, but has been deserted for the last five or six years. It is perhaps worth mentioning that from the same water, at the time when the last death on the pasture occurred, I received pure cultures of the anthrax bacillus.

"For the practical hygienic examination of waters the above method is fully reliable, and seems to be superior, as regards simplicity and delicacy, to any of the other processes. It permits of detecting directly even the minutest admixture of sewage or privy material without fail. I nevertheless always determine the organic matter in toto by ignition, which, besides, on account of the pecularities of the odor of the smoke exhaled at low ignition, may lead to some good judgment as regards the nature and quality too of the organic matter present. The permaganate and the albuminoid processes I consider as very vague and uncertain in their results and in the conclusions drawn from them.

"The products of the ethereal extract after the methods described above are worthy of being investigated more scientifically. Some of them apparently will be found to belong to the class of the so-called ptomanies or cadaver alkaloids, the chemical nature and physiological action of which recently have become the subject of closer study."—*The Sanitarian.*

SOME TENDENCIES OF MODERN MEDICATION.

A marked tendency of recent medication is in the direction of a continuous and limited administration of drugs. This has grown out of the
r generally accepted idea, that the patient is
proper subject of treatment, rather than the
ase with which he may be afflicted.
e notion that the doctor is simply a prescriber
edicines, and that his function wholly or in
of part ceases there, if it ever had a substantial
is either in theory or in practice, is rapidly
ppearing before the advancing light of a more
lligent and successful conception of the prac-
's function. The disease as modified by constitutional diathesis, idiosyncrasies, sanitary surroundings, inherited conditions, and by many other influences which refuse to be classified, becomes a secondary consideration. Indeed, so clear are the indications, and for the most part so uniform the respective lines of medicinal treatment of the more important diseases, that it should become a mere routine matter, simple and relatively easy of execution, to prescribe the standard medicines for a simple unmodified case. But not so with the larger and broader function of treating the patient. As a practical matter, the doctor may often exercise his highest and best skill and accomplish the greatest possible good for his patient by advising the entire suspension of medication, as such. The day has already arrived when the intelligent physician is very wary about ascribing the recovery of his patient to the medicines employed. Thus far has skepticism in regard to the specific power of medicine over disease extended; and hence the tendency of to-day toward a limited and continuous medication.

Another manifest tendency of comparatively recent appearance, but which promises rapid development, is toward the exhibition of relatively small doses, frequently repeated. That an effect can be produced by this method of administration, not only different in character, but preferable in results, seems from our *present* standpoint, to say the least, highly probable.

It occurred to the writer to recently observe the most gratifying results from one-tenth grain doses of calomel repeated hourly until the desired effect was produced, in a case of obstinate constipation and general glandular inactivity, associated with the digestive disturbances of advanced Bright's disease. This peculiar specific action of the remedy was realized much more promptly and satisfactorily, and with far less constitutional disturbance than would have been the case had the old-time single dose of ten grains been exhibited. The sentiment of the profession in favor of this method of medication seems to be rapidly gaining ground, as evidenced by the demand upon our manufacturing chemists for *granules, tablets, etc.*, containing minute doses. As an illustration we may mention what is well-known to all, that tablets containing $\frac{1}{100}$ of a grain of corrosive sublimate are now kept in our leading pharmacies. Manifestly the tendency of the times is toward minutely divided doses; but, be it understood, this statement is not designed to convey the idea of infinitesimal dosage according to the homœopathic plan. Minute dosage is one thing and no dosage quite another.

The tendency of modern medication toward the employment of medicines easy and pleasant of administration has become so manifest and general in its application as to need but a bare allusion. Indeed this tendency seems to have about reached the ultimate stage of realization!

This becomes apparent when we consider the all but universal employment of active principles, alkaloids, and concentrated medicines in general. It is hardly claimed that the therapeutical effects of remedies as a whole are improved by the use of their active principles. Indeed, I think there is ground for the fear that in some instances the active principle does not represent all that is valuable and desirable in the therapeutical effect of the drug. However, the tendency to a pleasant medication has become so imperative in its demands as to overcome some possible disadvantages, for it is a well-established therapeutical principle that all things else being equal the pleasant dose is much more likely to accomplish the desired result than the nauseous one, and *just here* we find the explanation for the comparatively recent establishment of so many houses all over the land engaged in the preparation of medicines in palatable forms.

Another possible tendency of recent origin is seen in the employment of triturates. By the minute subdivision and separation of the particles of a medicinal substance, through the agency of an admixture, it is claimed—and perhaps on a rational basis—that the power and effect of the agent are thereby not only increased but a new action is developed. The time honored "Dover's powder," is a great example of a triturate. That the trituration gives the combination additional therapeutic effect over the different elements of the mixture is beyond doubt.

The superior action of this form of medication is supposed to be due to the more prompt and thorough subjection of the remedy to the action of the digestive juices.

It is with misgiving that I record in this connection another tendency of the times in regard to medication. I refer to the disposition to be satisfied with impure and otherwise inferior drugs. The extreme desirability of absolutely pure medicine up to the pharmaceutical requirements in potency as well as purity, to him who proposes to cure disease by their use, goes without saying. It is, however, a palpable fact that physicians as a whole are very mild in their suggestions for a purer and more reliable pharmacy. If they were as decided and emphatic in their demands as the importance of the matter requires, the evil of inferior medicines would rapidly disappear. A craze in pure drugs would be salutary in its results, both in relation to the sick and to the character and efficiency of the profession.

Clearly purity and potency of medicines should be, unhappily what it is not, and the doctors are the cause of it, a marked and decided tendency of modern medication.—*Med. and Surg. Rep.*

For the *constipation* concomitant with *gastric cancer*, Prof. DaCosta advises rectal injections of ʒj of glycerine.

DR. BULAU'S OPERATION FOR EMPYEMA.

In connection with the achievements of Hamburg physicians, I will briefly describe Dr. Bülau's method of operating for empyema, which has for many years been extensively practised in that city, but which has hitherto, chiefly in consequence of his never publishing anything on the subject, not been so generally appreciated as it deserves. It was warmly recommended to the notice of the profession at the meeting at Wiesbaden by Dr. Eisenlohr, and has since, among others, been applied in the Charité at Berlin by Geh. Rath Leyden, who speaks very favorably of it, as an elegant and convenient operation. The details are as follows: After the necessary disinfection, a small incision is made in the skin at the spot chosen, the most suitable place being in the axilla in an intercostal space as near to the lowest level of the empyema as the individual case allows. As this cut is about the most painful part of the whole proceeding, anæsthesia is unnecessary, a not unimportant danger thus being entirely eliminated. A stout, round trocar is plunged into the pleural cavity, the stilet is withdrawn, and an elastic catheter, just accurately filling the lumen of the cannula is slipped in. Dr. Bülau prefers a Nélaton catheter to an ordinary rubber drainage tube, as it is not so compressible; a point of some weight. The catheter is supplied at its internal extremity with two or three openings to admit of free exit of pus. It is inserted a few inches into the pleural cavity and the sheath of the trocar is then removed, the catheter being held closed either by hand or by a clamp, to prevent the possible entrance of air while manipulating. The edges of the wound maintain by their elasticity, firm contact with the catheter, which is then fixed to the wall of the thorax where it emerges from the pleural cavity by thin layers of cotton, wool and collodion a little powdered iodoform having first been sprinkled on the wound. In this manner a perfect air-tight closure is effected. In addition a silk thread should be tied round the catheter where it emerges from the chest and the two ends fastened by means of adhesive plaster or strips of gauze pasted on the skin of the thorax. A little pad of cotton wool may in addition be wrapped round the whole and fastened with a roller to guard the catheter from being strained in case the patient be restless. This last precaution may, however, be injurious if applied before the collodion dressing is perfectly dry, as the air-tight occlusion, which is the salient point of this method, is liable to be impeded thereby. The outer end of the catheter (the thick edge having, of course, been cut off to admit of free passage through the sheath of the trocar), is now

joined by a small piece of glass piping to an india-rubber tube reaching to the ground and filled (by the aid of a funnel and clamps) with a three per cent. solution of boracic acid. On lowering the outer end of this tube, after the clamp has been removed, the fluid within acts by the syphon principle on the pus in the thorax and a steady outflow is at once established, which is led into a glass jar containing a small quantity of some disinfectant (boracic acid), sufficient to prevent air from reaching the opening of the tube. In order to keep this from floating to the top of the fluid, the funnel is left in the end of the tube and may also be weighted with a little ring of lead. By this means the pus is pretty rapidly removed from the pleural cavity, the lung distending proportionately at the same time. After some days it becomes necessary to shorten the tube within the thorax, and to fix it anew, as the aperture tends to widen in course of time. If the flow gets blocked in the first few days, this is generally due to stoppage in the outer tube, which is easily remedied, care being taken to retain the syphon action. When strong enough to leave their beds, the patients may be placed on a chair during the daytime, and towards the end of treatment they can even be allowed to walk about, the glass jar being replaced by a bottle, which the patient carries in his breeches pocket. Almost at any time of the year one will find in one or the other of the wards a patient of this kind with his little bottle in his pocket, a representative of the sage's *omnia mea mecum porto*. The method is naturally equally applicable to non-purulent exudations in the pleura where it affords the advantage of avoiding repeated tapping, so often necessary in this affection. Two cases of abscess of the liver, one due, as was finally shown, to suppurating echinococcus, and the other probably of dysenteric origin, were both treated by this simple method with complete recovery.—German Correspondence, *Oc. Med. Times.*

MEDICAL NOTES.

Among the causes for *angina pectoris*, Prof. Bartholow mentions tobacco, used either excessively or by the young.

Calomel being a hepatic sedative is indicated when the *liver is overacting*, producing bile in ɜss.—Prof. Bartholow.

℞ Van Harlingen, for *scabies* :—

—Naphth ılin,
Sulphuris, ... āā ʒ iv.
Adipis, ... ʒ iv.—M.

. the treatment of *diphtheria* by mercurials, ı. Da Costa prefers minute doses of corrosive limate from the start, together with feeding, —lus, etc.

For *dyspepsia*, accompanied by flatus, eructation and vomiting, give creasote or carbolic acid to prevent fermentation, alkalies between meals to overcome acidity.—Prof. Da Costa.

For the *nephritis of scarlatina*, early, when the urine contains blood, digitalis is the remedy ; but later, when the urine loses its bloody character, Basham's mixture will be useful.—Prof. Da Costa.

As a means of aborting *acute bronchitis*, Prof. Da Costa advises hot drinks and foot bath at bedtime, and the administration of 10 to 20 grains quinine ; also keep the patient in the house for a few days.

For *amenorrhœa* :—

℞—Aloes pulv.,
Ferri sulph. exsiccat.,
Terebinth alb., ... āā gr. xij.—M.
Fiat pil. xij. Sig.—One t. d. —Prof. Parvin.

After administering the antidote, pilocarpine, in *atropine poisoning*, do not neglect to draw off the urine with a catheter, for the bladder may absorb the atropine and defeat the action of the antidote.—Prof. Holland.

For a case of *exophthalmic goitre*, Prof. Bartholow directed the following :—

℞—Picrotoxin, ... gr. $\frac{1}{10}$.
Ext. ergotæ aquos., . . . gr. iiss.—M.
Fiat pil. j. Sig —t. d.

In a receut case of *hysteria* at the Jefferson Medical College Clinic, Prof. Da Costa prescribed valerianate of zinc, gr. ij. four times a day, and at night—

℞—Chloral hydrat., ... gr. x.
Sodii bromid., ... gr. xx.—M.

Rest, milk and a nourishing and stimulating diet were prescribed. During her monthly sickness she was directed to take apiol, gr. v, six globules in the twenty-four hours before and during menstruation, the zinc preparation being omitted at that time.

In the operation for *excision of the testicle* great care should be exercised in the treatment of the spermatic cord ; it should be tied *en masse* ; always ligate the arteries separately ; also the veins and vas deferens.—Prof. Gross.

In some cases where the officinal syrup of iodide of iron does not agree with children, Dr. Rex found a good substitute in—

℞—Potassii iodidi,
Ferri pyrophosph., . . āā gr. xvj.
Syrup limonis,
Aquæ menthæ piperit, . āā f ʒ j.—M.
Sig.—A teaspoonful t. d.

A man whose chest and arms were covered with

tænia versicolor was brought before the clinic by Dr. Van Harlingen, and the following prescribed—

℞—Sodii hyposulph.,
Glycerin, ... āā ℥ iv.
Aquæ, ... q. s. ad ℥ vj.—M.
Sig.—Apply twice daily.

To determine the site of *obstruction of the bowels*, the accumulation may often be felt through the abdominal walls with the hands; in case this cannot be accomplished, the following symptoms are of value for determining the site of the obstruction: If the obstruction be high up there is little secretion of urine, if low down there is free secretion of urine.—Prof. Da Costa.

For a case of *secondary syphilis*, at the clinic, the patient being in a weak and anæmic condition, Prof. Gross directed—

℞—Mass. hydrarg., ... gr. ij.
Quiniæ sulphat.,
Ferri sulph. exsiccat., . . āā gr. j.
Opii pulv., ... gr. ¼.—M
Fiat pil. j. Sig.—t. d., after meals.

Prof. Forbes states with emphasis that, to remove accumulated *sebum* from the ears, no ear spoon or probe should be used, there being great danger of tearing the membrana tympani. A dilute solution of glycerin in tepid water should be used several times a day to syringe out the ear, thus softening the accumulation and allowing it to come away without the use of instruments which might injure the membrane.

For a boy six years old brought before the clinic suffering with *thread worms*, the following prescriptions were given—

℞—Hydrarg. chlorid. mitis, . . gr. iv.
Santonin, ... gr. j.—M.
Fiat chartæ iv. Sig.—One every hour.

After this had passed through the system, an injection of the following, a teaspoonful to an ounce of tepid water, twice daily—

℞—Extract quassiæ fluid,
Extract ergotæ fluid, . . āā f ℥ j.
Aquæ, ... q. s. ad f ℥ ij.—M.

—Dr. Rex.—*Coll. and Clin. Rec.*

ON PILOCARPINE IN DEAFNESS.

Dr. Field thinks the remedy useless in senile deafness and attributes the many failures of the treatment reported due to the fact that the patients have been over sixty years of age. He says:

"I would ask the profession to suspend their judgment for a time on this question, as to the efficacy of pilocarpine injections in labyrinthine disease, and even in chronic catarrh of the middle ear without Eustachian obstruction. I have had more successes than failures in my own selected cases, and I am continually hearing of encouraging results from others."

He reports three new cases.

"1. A medical man consulted me some time ago, and said he was so deaf that he was afraid he must give up practice. I suggested he should try pilocarpine injections for six weeks. He now writes (July 7th): 'I used the nightly injections for six weeks, with almost a complete cure; you cannot think how thankful I am for the restoration of my hearing.'

"2. A lady, aged thirty-four, very deaf for fifteen years, writes: 'I am glad to say I have received much benefit from your treatment. I can now hear general conversation and take part in it; I can also hear musical instruments playing in the streets and the minister speaking from the pulpit, and also have less noise in my ears.'

"3. A lady who had been deaf for seventeen years, unable to hear without a trumpet, writes: 'On the first day I was injected I was unable to hear a watch or clock tick. On the ninth day, noticed sound in my own voice; on the fifteenth day, could hear my own watch tick for the first time for eight years; twenty-second day, noticed immense improvement, heard bells, knocks, watch two inches distant from right ear, and faintly at left; fiftieth day, continued improvement; fifty-seventh day, heard sermon with trumpet; sixty-fourth day, heard sermon without trumpet.' She remarks on the general result: 'Immense improvement in hearing; can now hear all the clocks in the house tick. Much easier to maintain conversation with one person. Much more conscious of sounds in the house.'"

Dr. H. M. Jones says, in my "Practitioner's Handbook on Diseases of the Ear," is the following: "It is a question if we avail ourselves of the action of pilocarpine as frequently as we should. It is probably the most certain and powerful of all our drugs in cases suitable for its administration, where the reduction of vascular tension is our object, and in which we desire to check effusion and control the tendency to extravasation. These are exactly the conditions in the earlier stages of Ménière's disease and other forms of vertigo in which labyrinthine effusions are threatened. I may add that I first used pilocarpine subcutaneously in labyrinthine vertigo in 1879. I have since (as in a remarkably successful case of typical Ménière's disease, referred to in my 'Handbook' in 1885) repeatedly advised and resorted to the use of pilocarpine in labyrinthine vertigo. My success has been marked in some instances, and failure as complete in others has followed its employment. I may say in conclusion, that notwithstanding my unfavorable relations with this drug in one memorable case, I consider as a reducer of

vascular tension, especially in ocular hypertension and effusion, when given subcutaneously in appropriate cases, it stands unequalled, and that prudently administered, it is as safe a remedy as any other powerful therapeutic agent we are daily using for other therapeutic indications."

Dr. H. Barrett has used it in four cases. These occurred in the persons of three gentlemen, whose ages varied from forty-five to twenty-three, and one lady, aged twenty-one. In each case the treatment was continued for six weeks, and in each of the male cases material improvement was effected. In the lady's case, he could not find any worth mentioning. It was not merely that he detected improvement in the three male patients by the usual methods of testing, but they expressed themselves as hearing with much greater facility.

His experience with the small number of cases mentioned led him to believe that the full benefit of the treatment could not be gained in a less time than six weeks; and it is probable that in many cases an even longer period would be better.—*Br. Med. Jour.*

Creasote in Tuberculosis.—Professor Sommerbrodt, of Breslau, in two communications to the "Therapeutische Monatshefte," declares that an experience of over five thousand cases has proved to his own satisfaction that creasote is not merely a useful drug for the symptomatic treatment of tuberculosis, as has been conceded by others, but that it exerts a specific influence on the disease by the resistance it offers to the cultivation of tubercle bacilli. Dr. P. Guttmann had by his experiments shown that tubercle bacilli could scarcely be cultivated in sterilized serum containing $\frac{1}{1000}$ of its volume of creasote, and the culture entirely failed when the solution was a little more concentrated. He concludes that if it were only possible to administer sufficient creasote for the blood to contain that drug for some time in the proportion of $\frac{1}{1000}$ of its own quantity, tubercle bacilli would probably cease to develop. This, he contends, is impossible, not only because the required quantity of creasote in the blood would be more than twenty grains, but because it would be impossible to determine what quantity of creasote would have to be administered to make twenty grains of it circulate in the blood. Sommerbrodt believes that it is possible to give the necessary quantity of creasote. He has been prescribing for some time many hundreds of tuberculous patients capsules creasote, each containing one grain of the drug. ese capsules were taken, three the first day, and y succeeding day one more until the eighteenth after which the same quantity—from twenty wenty-five grains per day—was continued for ay months. The author says that it is impossible resume that the twenty grains of creasote have ady entirely passed out of the blood by the time the second or third dose of the drug is given, so that probably such an accumulation of creasote takes place in the tissues as to fulfil Dr. Guttmann's postulate. He has, at any rate, had the most gratifying success with this medication, and his experience was that the more creasote a patient could bear in a day the greater was this success. The *modus operandi* of the creasote, Dr. Sommerbrodt says, has not yet been sufficiently cleared up. . . . He suggests, therefore, that serum from a man who has for some time taken more than twenty grains of creasote be used to cultivate tubercle bacilli, so as to find out if this acts differently from the serum of another person used for the same purpose.—*Lancet.*

Death at the Commencement of Chloroform Inhalation.—"A curious death occurred at Birmingham, recently, during the administration of chloroform. A lady, about 25 years of age, of very nervous, excitable temperament, desired to have some teeth extracted, and insisted upon an anæsthetic. In the presence of her husband and the dentist, her medical attendant administered chloroform. The patient was seated in an easy chair, and, after inhaling a few breaths of chloro form, she slipped down in the chair, and her pulse and breathing were both found to have stopped. Artificial respiration was at once resorted to, but without success. It seems perfectly clear that the patient was not anæsthetised when she died, as she had only just commenced to inhale the chloroform, and, of course, no attempt had been made to extract her teeth. The coroner's jury returned a verdict that death was due to syncope, and that no blame whatever attached to the administrator." Syncope, as has long been known, will result from any very violent emotion, and especially from the effects of fear. In a case recorded in Germany a few years back, a female patient visited a dentist, and requested him to extract some carious teeth, demanding, at the same time, that she should be chloroformed. The dentist, very properly, explained the risks of chloroform, and suggested nitrous oxide; but his patient persisted, and he consented to humor her. Having, however, a wholesome dread of chloroform, he substituted eau-de-Cologne, and bade her inhale the supposed anæsthetic from a folded towel. After two or three inspirations she suddenly fell from the chair, and died. That death occurs from fear in some cases during the earliest stage of chloroforming is unquestionable; and as it is predisposed to by the sitting posture, and by forcibly restraining the patient's voluntary movements, there can be very little doubt that in every case in which chloroform is to be administered, the recumbent posture should be insisted upon, and a loose dressing-gown substituted for the usual workaday costume. There is another point of no small importance, which is

that chloroform increases the liability to death from "reflex syncope." A person partly under chloroform is more prone to die from fright than one to whom chloroform has not been administered. Nor must it be forgotten that deaths occur when only one or two inspirations of chloroform have been taken; this is liable to take place when a too concentrated vapour (that is, one of greater strength than 4%) is employed. In the event of syncope occurring in one of the ways above indicated, the line of treatment which offers the greatest chance of success is total inversion of the patient, while care is taken that the rima glottidis is maintained patent for entrance of air. Dr. Chisholm, who has strongly supported this, Nélaton's original manœuvre, has recorded some highly instructive cases in which the method of inversion being promptly performed, effected resuscitation, and so saved the patient's life. But here a caution must be given. Nélaton's method is valuable only in primary syncope, and is absolutely dangerous in cases of heart failure consecutive upon pulmonary engorgement and overfilling of the right heart; or, in short, when respiration stops before the heart ceases to beat. Cases belonging to this last category do not occur, as a rule, until the later stages of chloroformisation, and the respiratory failure is then due to overdosage with the anæsthetic.—*Brit. Med. Jour.*

Recent Experience of Electrolysis in Uterine Fibroids.—An interesting discussion on the treatment of fibroid tumours took place at the American Gynæcological Society last month. Dr. P. F. Mundé said that he had found that the cessation of growth produced by Apostoli's method was not permanent. In his opinion the best treatment for the subperitoneal variety, in cases in which treatment of a surgical character was required, was removal of the uterus with the tumour, or removal of the ovaries alone. In the interstitial variety, the tumour could often be removed without removing the uterus; in the submucous variety, the tumour alone would require removal. He reported three cases in which he had performed oöphorectomy for the relief of uterine tumours the results had been satisfactory. In six cases in which subperitoneal tumours had been removed through the abdomen, recovery had taken place in four; in all cases the pedicle had been treated by the extra-peritoneal method. He considered that laparotomy should not be performed if a tumour was causing no serious trouble, and no operation was indicated in most cases in which the menopause was imminent.

Dr. W. Gill Wylie, on the other hand, held that if there were pain and failing health about the time of the menopause, it was usually an indication that degeneration was taking place, and hysterectomy would probably be indicated. Fibroid tumours, he thought, were like all organic matter, and had their periods of growth and decay; he believed that the life of a tumour was from two to eight years. The use of a curette sometimes controlled hæmorrhage, but if it failed he preferred to remove the tubes and ovaries. He spoke hopefully of hysterectomy, having had a death-rate of only 10 per cent., and being persuaded that he could attain still better results in the future. He spoke with some reservation of electrolysis, as his experience had only extended over two years, but he expressed his belief that its value had been overestimated. If it did no harm, it would at least cause delay, and thus might remove a patient's only chance for relief by operation; though electricity would doubtless stop bleeding from fungous growths of the uterus, it might also cause damage, and was, in his experience, no safer than the curette.

A more favorable opinion of electrolysis was expressed by Dr. Reamy, who said that he had met with cases in which oöphorectomy would not always stop the hæmorrhage caused by uterine tumours, and Dr. G. J. Engelmann, while admitting that his results in the treatment of uterine fibroids by electricity had not come up to his expectations, said that the effect had been excellent in cases in which the uterus was surrounded by hard masses of exudate. The same was true in the treatment of both profuse and scanty menstruation. In most cases in which electricity had been used by him the patients had become more comfortable. In poor working-women this was, he considered, of great consequence

Dr. J. R. Chadwick, on the other hand, spoke very strongly against electrolysis. He said that he had followed Apostoli's directions carefully in twenty-four cases, and had seen improvement in but one. In that case the hæmorrhage was checked for three years. In none of them had the tumours been reduced in size. In two cases death had resulted, and two others had been nearly fatal. Two other speakers, however, Dr. Van de Warker and Dr. Mann, mentioned cases in which the treatment had been used with success, and Dr. Mundé stated that he had seen three tumours disappear after galvano-puncture.

It will thus be seen that very considerable difference of opinion continues to exist among gynæcologists in America who have given electrolysis a more or less extended trial.—*Br. Med. Jour.*

Goitre Treated Successfully with Strophanthus.—Up to the present date I have treated successfully five cases of goitre without a single failure.

Miss Anna C., æt. 22, called on me, Dec. 1 1888, suffering from "big neck," as she called Various remedies (such as ergot, bromides, a digitalis, were given internally, and injections

carbolic acid and ergotin made into the gland) were tried without any appreciable results. At last I prescribed strophanthus for her in ten-drop doses, three times a day. At the time she commenced taking strophanthus, her neck measured fourteen inches. In ten days it measured thirteen inches, and in three weeks twelve inches. The strophanthus was given in ten-drop doses, three times a day, for one week, and then increased to twelve drops three times a day, and, finally, up to sixteen drops three times a day. The enlargement subsided very rapidly, and in two months she declared herself well, and, to all appearances, she was cured. The only unpleasant features about the treatment in all cases that I have treated, is the profound dizziness and faintness.

Miss Jennie R., æt. 16, called on me, Jan. 8, 1889, with an immense goitre. It measured thirteen and one-half inches. She was put upon the tincture of strophanthus, and her recovery was as prompt and satisfactory as the first case reported. She was discharged cured, March 15.

The other cases were similar to these, and equally rapid. My attention was first attracted to the value of strophanthus in goitre in a most singular manner. Last December, Mrs. R. sent for me to treat her for some heart trouble. She was short of breath, suffered from palpitation, and had a very bad capillary circulation. She informed me that digitalis acted like a poison to her. She also showed me her goitre, an enormous one, and said that her former physician had given her ergot and digitalis for it, without any effect, save to make her deathly sick. She needed a heart tonic, and I prescribed it for her in big doses (ten drops every four hours). I left her, and saw no more of her for three weeks or more. When she did show up, she was much improved, and the most astonishing part of all was, her neck was decidedly smaller. Her breathing was good, and she felt much better, and she was greatly relieved, but never cured, for the simple reason she would not take it any longer.—S. T. Yount, M.D., in *Medical Waif.*

MALE FERN AND CALOMEL FOR TAPE-WORM.—In the treatment of tænia, Dr. Duchesne strongly recommends male fern combined with calomel, according to the following formula:

℞—Eth. extract male fern, . . ʒ ij.
Calomel, ... gr. xij.—M.
.—Make 16 capsules, which are given two
- time, every ten minutes until all are taken.

great advantage of this preparation is that patient has nothing to drink, and that the gative is taken along with the worm-medicine. some people, especially women, capsules are —lt to take, in which case the medicine is perhaps best taken with molasses. Sometimes the capsules provoke colicky pains, but these can be avoided by taking twenty grains of antipyrin fifteen minutes before the capsules. With these capsules Duchesne has yet to experience his first failure, and he has already used them in hundreds of cases. Male fern is the only remedy that will successfully expel the bothriocephalus. The treatment of tænia in children is a difficult matter, but he has been regularly successful with the following plan: After fasting twelve hours, administer the following preparation to a child of five years:

℞—Eth. extract male fern, . . ʒ j.
Calomel, ... gr. vj.
Sugar, ... ʒ ij.
Gelatin, q. s. to make a jelly of ordinary consistence.

The patient should be told to take an injection of salt water when the worm appears at the anus, and then sit over a vessel of warm water to float the worm and prevent it breaking from its own weight. The one point always to be remembered, on which success depends, whatever the vermifuge used, is the necessity of administering the purgative soon after the substance which stupefies the worm.—*The Weekly Med. Rev.*

CONTAGIOUSNESS OF PHTHISIS.—The report of the committee appointed last year was made by Dr. William Porter, of St. Louis, Mo. He thought that the word portageous was more accurate than contagious. He thinks the evidences of transmissibility in tuberculosis are conclusive. Two hundred and fifty-one English physicians, in active practice in families, have replied in favor of the theory of the transmissibility of tuberculosis. The New York Board of Health has passed resolutions which acknowledge this contagion. The fact has been published that there have been no cases of tuberculosis among the nurses and house physicians at Brompton Hospital. This is true, on account of the excellent hygiene of that institution, and does not prove the non-contagiousness of the disease. It has been written that there was no tuberculosis among the North American Indians, and but little among the early settlers of New England. One hundred years ago the climate of New York was thought to be good for tuberculosis by Europeans, who sent their patients there; then, later, the prairies of Illinois were lauded for the same purpose; later still, the mountains of Colorado and the valleys of California. He emphasized the fact that the care of localities used as resorts for consumptives was very important, so that they do not get infected with the disease. He recommended that consumptive patients use cuspidors in which there was a 1 to 1,000 solution of bichloride, as it has been demonstrated that a weaker solution has not al-

ways the potency sufficient to destroy the bacilli. He recommended, as a prophylactic measure to the spread of tuberculosis, the most careful inspection of meat and milk. He considered the future of this subject a bright one.—*Med. Rec.*

Creasote: Formulæ for the Administration of. — Dr. Keferstein (*Therap. Monatsch.*) gives some very good formulas for the administration of creasote. The one at first recommended by Dr. Bouchardat, and later on by Dr. Frantzel, has been modified by the author as follows:

℞—Creasote, ... gr. xx.
Alcohol, ... ʒ vj.
Cinnamon water, ... ʒ iij.
Cinnamon syrup, ... ʒ vj.—M.

Sig.—One teaspoonful three times daily.

For the pill form the following is recommended:

℞—Creasote, ... gr. lx.
Powdered marshmallow root,
Purified liquorice, . . . āā ʒ jss.
Mucilage of gum arabic, . . . q.s.—M.

Div. pill. No. cxx. Coat with gelatin. Sig. —One pill three times daily.

In irritative cough and diarrhœa the following is administered:

℞—Creasote, ... gr. xxx.
Acetate of lead,
Opium (pure), ... āā gr. v.
Extract of liquorice, . . ʒ jss.
Mucilage of gum arabic, . q.s.—M.

Div. pill. No. 50. Sig.—One pill three times daily.

For children, creasote in the form of the following emulsion seems best adapted:

℞—Creasote, ... gr. xx.
Dissolve in almond oil, . . ʒ j.
Gum arabic, ... ʒ v.
Water, ... ʒ iij.— M.

Make an emulsion and add

Comp tinct. of orange peel, gtt. xv.
Oil sugar of peppermint, . ʒ j.—M.

Sig.—One teaspoonful two to five times daily.

For drop doses the author uses the following:

℞—Creasote, ... gr. xlv.
Tincture of cinnamon, . . . ʒ j.—M.

Sig.—Fifty drops three times daily in a half a cup of warmed milk or warmed sweetened water, or Malaga wine, etc.—*Deutsche Med. Wochen.*

Diagnosis and Treatment of Scrofulous Glands.—I cannot help thinking that excision of scrofulous glands is an operation which rests on sound surgical principles. We have a diseased, condition in organs which the body can well spare—a condition which tends constantly to cause infection by continuity of adjoining glands, and even by means of the blood, to develop tuberculous disease in distant parts. Why should this diseased product be allowed to remain to work its own sweet will unmolested and undisturbed? Tuberculous disease is removed from all other accessible parts or organs: why should glands be privileged? I submit there is every reason why they should be removed, and removed thoroughly. Take the case of a family of scrofulous tendencies. One member only may actually develop the disease, say, in the form of scrofulous glands; if this child's diseased glands are thoroughly removed, if all sources of irritation are removed and the child's health established by being sent to the seaside, that child is put back in the position of his brothers and sisters who have never had the disease. He is not more likely to have a return of the scrofulous gland than his brothers and sisters are to develop them—in fact, he is cured. The only valid argument that could be used against the excision of scrofulous glands is the possibility of undue risk. Scrofulous glands are situated usually in the midst of important vessels and structures, and their removal might be considered dangerous. I can only state that I have excised scrofulous glands for many years, and that I have never lost a case. I attribute this success partly to good-fortune, but mainly to the fact that I never incur, by premature closing of the wound, the slightst risk of retention of discharges or bagging. I have operated on many cases of great enlargement I have removed more than a pound's weight in glands from one patient, and more than one hundred in number from another. I have excised glands in a case where the mass was sufficiently large to threaten suffocation. My colleagues are doing the same, and we can prove, by a great number of cases, that the operation is not attended with undue risk, and that the results are good.—W. K. Treves in *Lancet*.

A Case of Diabetes Mellitus.—Dr. Ivan Michael relates the following case in *Deutsch. Arch. f. Kl. Med.*: A robust man, æt. 20 years, began to present the symptoms of a moderately severe diabetes, without any apparent cause. After three months his increasing weakness and extreme thirst forced him to seek the hospital. While there he had passed through an otitis media suppurative, left, but his general condition improved so much that he was discharged at the end of three months at his own request. Shortly after leaving the hospital his ear trouble returned, and his strength rapidly failed at the same time; he was readmitted to the hospital and died two days afterward in a state of coma, and about six months after the first sign of diabetes.

At his first admission to hospital, an examination of the urine gave a plain acetone reaction and 2½ per cent. of sugar.

At the post-mortem, a free cysticercus racemosus was found in the fourth ventricle; there were exuberant granulations on the ependyma of the fourth ventricle. During life there had been nothing save an occasional passing headache, that might have indicated a lesion of the central nervous system; this was probably owing to the slow growth of the tumor.

According to Prof. Steinbruegge, inflammations of the middle ear are not at all rare in diabetes. Several cases of cysticercus of the fourth ventricle have been described, in which there was no accompanying mellituria; in one case there was diabetes insipidus.—*Deutsch. Med. Zeit.*

THE DISSEMINATION OF TUBERCULOSIS. — The Berlin correspondent of the *Medical Press* says:—"I have already repeatedly alluded to the labors of Dr. Cornet, in the Hygienic Institute under the auspices of Prof. Robert Koch, in regard to the dissemination and prevention of phthisis. Being a Bavarian by birth, he some time back sent a copy of his publications to the Bavarian Government, with the request that they should put the correctness or otherwise of his views to the test. It was not to be expected that they should undertake an extended inquiry at the dictate of a private individual, but they did pass on the writings to the Ober Medizinal Auschuss. The referent on the occasion, Professor Bollinger, has decided to enter on an investigation as regards prisons. It is notorious that a great number of prisoners, nearly one-third, die of phthisis. Professor Bollinger has determined that they shall not die of phthisis contracted within the prison walls, *i.e.*, if Koch's views on its etiology are correct. For the future, all cells are to be disinfected as thoroughly as after cholera or the plague. Further than this, all prisoners already phthisical, or suspected of being so, are to be removed. All sputa are to be disposed of in the way recommended by Dr. Cornet. The proposed experiment has all the appearances of being a crucial one, and the results will be watched all over the world with great interest."—*Med. Rec.*

ALOPECIA PRÆMATURA.—Dr. Oscar Lassar has an interesting paper on the nature and treatment of alopecia (præmatura) furfuracea. This, the commonest form of baldness, is, according to the author, extremely contagious, and can be experimentally communicated from man to the lower animals, while every day it is unconsciously being spread widely among the general population. No specific organism has yet been isolated, but a number of cases are given to prove the contagious nature of the disease. The following treatment is recommended as being efficacious in most cases; the hair is washed daily with tar or other soap for fifteen minutes, after which the soap is carefully removed with abundance of water. It is then rubbed with the following lotions: (1) hydragyri perchloridum (½ per cent. sol.) 150 parts, glycerin and eau-de-cologne of each 50 parts; (2) B-napthol 1 part, absolute alcohol 200 parts. After careful drying, the following pomade is used: Acid salicylic 2 parts, tincture of benzoin 3 parts, olive oil to 100 parts. The cure may take six weeks or longer, and careful prophylaxis with regard to brushes and combs must be carried out. —*Br. Med. Jour.*

A SIMPLE METHOD OF REDUCING DISLOCATIONS OF THE HIP.—Dr. Lewis A. Stimson, of New York, describes in the *N. Y. Med. Jour.* a method which has served him when other manipulations had failed in backward dislocations of the hip-joint. The principle involved is that of making the weight of the limb a coadjutor in the reduction instead of an opponent. The patient is brought to the side of the bed, the injured limb is made to hang directly down, while the knee is fixed at a right-angle. The surgeon supports the ankle while he gently moves the limb from side to side, when presently the muscles will be found to be relaxed, then with a slight pressure downward with one hand in the hollow of the knee, the bone will generally slip into place with an audible snap. The downward pressure can also be effected by placing a heavy sand-bag, five or six pounds, upon the upper part of the leg and in the hollow of the knee. This simple method occurred to Dr. Stimson one summer day when he was exhausted in his efforts to make reduction by other well-known procedures. The first time he tried it, the attempt was successful in less than one minute; and the success in two other and more recently reported clinics indicates that the plan may succeed in many cases.—*Practice.*

INFLUENCE OF ALIMENTATION ON THE COMPOSITION OF MILK IN WOMEN.—Dr. Zaleski submits the following conclusions:

1. A milk too rich in fatty matters may exercise a deleterious influence on the health of the child.

2. An alimentation abundant and rich in albumen augments greatly the quantity of fatty matter contained in the milk; it diminishes the quantity of lactose, and has but little influence on the other elements.

3. A suitable diet will permit to a certain extent the obtaining of a necessary lacteal composition for each child in each particular case.

4. Alimentation exercises, therefore, a marked influence on the composition of the lacteal secretion, in man as well as in animals.

5. The fatty matters in milk are probably pro-

duced, directly or indirectly, from the albuminoid substances introduced by alimentation.—*La France Méd.*

TREATMENT OF BALDNESS.—Dr. E. Besnier states that the falling out of the hair may be checked and a new growth started by the following treatment. The hair should be cut short and a mild sinapism or rubefacient applied to the scalp; then every five days the following lotion is to be applied:

℞—Acid. acetic,
Chloroformi. . . . . āā q. s.—M.

The above should be used cautiously, as it is an irritant, and stimulates the hair powerfully. In connection with the above, the following pomade should be used:

℞—Acid. salicylic, ... gr. xv.
Sulph. precip., ... ℥ jss.
Vaselini, ... ℥ v.—M.

This pomade should be applied fresh every morning, the scalp having been previously washed. Fatty substances retard the growth of the hair and should not be used.—*Jour. de Méd. de Paris.*

EFFECTS OF PROLONGED CHLOROFORM ANÆSTHESIA.—"Some observations, made about two years ago by Dr. Ungar, pointed to fatty degeneration of the heart and liver as the cause of death after repeated prolonged administration of chloroform. Further experiments on dogs have recently been made by Dr. Strassman, which appear to confirm this view. Dr. Strassman found that the first organ to be affected was the liver, then the heart, and after that other viscera. The nature of the morbid change was not a fatty degeneration, but fatty infiltration. The actual cause of death in fatal cases appeared to be the cardiac affection, as in all such a very marked degree of change was found in the heart. In non-fatal cases the morbid change was found to have disappeared in a few weeks' time. When morphine was given previous to the chloroform, less of the latter was required, and, consequently, the changes produced were not so considerably as when the ordinary amount was given. Animals suffering from hunger, loss of blood, etc., were especially predisposed to the morbid changes due to chloroform."—*Lancet.*

HEREDITY.—Sir William Turner, Professor of Anatomy in the University of Edinburgh, delivered an address on "Heredity," in which, while pointing out that in some cases structural lesions, such as hare-lip, color-blindness, and deaf-mutism, are transmitted, he also maintained, in opposition to some physiologists, that acquired characters can be transmitted from parent to offspring. He said, in concluding his address, that whatever the origin of man's frame, whether by evolution or otherwise, it could scarcely be expected ever to attain greater perfection than at present. Man was, however, also endowed with a spiritual nature, and the kind of evolution to be hoped and striven for was the perfecting of this spiritual nature, so that the standard of the whole human race might be elevated and brought into more harmonious relation with that which was holy and divine.—*Med. Rec.*

THE INFLUENCE OF POSITION UPON THE PHYSICAL EXAMINATION OF THE HEART.—Dr. H. Zerhinser, *Med. Tijdschr. voor Gen.*, states that in young people in changing from the standing to the reclining posture apex beat moves not only laterally, but also vertically. This explains why in many persons with normal hearts the apex beat is found in the fifth interspace in the upright position, and in the fourth interspace on lying down. In many youthful individuals there is found dullness over the sternum on lying down, which is confined to its left half and is continuous with the cardiac dullness. In some this disappears on standing up, in others it remains unchanged. The aortic second sound is frequently weaker than the pulmonary second sound. This generally occurs only on lying down and is more common in ill-developed than in large and robust chests. Systolic and diastolic murmurs, chiefly mitral, are often found in young people in the course of an acute articular rheumatism, that cannot be heard in the standing or sitting posture, but quickly return when the patient lies down. It is not improbable that in these patients the conditions which govern the transmission of sound to the chest wall are different from those in older individuals.—*Deutsch. Med. Zt.*—*Weekly Med. Rev.*

GELSEMINUM IN HEADACHE. — Editor *Medical World*:—When you have a case of headache with flushed face, bright eyes, contracted pupils, throbbing temporal arteries, you can cure it with as much certainty as you can cure hunger with ham and eggs. Be sure you have a good reliable fluid extract of gelseminum, then give five drops every hour until cured. I formerly gave twenty drops at once, but some people are as readily affected with five drops as others are by twenty.—J. H. MYERS, M.D., Lewiston, Oct. 10, 1889.

DOCTOR—"Not so well to-day, eh? Have you kept him quiet and given him his medicine regularly?" Mrs. Richard Bevylin Buckner—"Dey 'ain't been nobody in de room wid him 'cept me an' de children, so he's been nice an' quiet an' I give him de med'cine like you tole me—three spoonfuls every hour." Doctor—"Great heaven woman, it's a wonder he's alive! I said one spoonful every three hours." Mrs. Buckner—"We now, Doctah, dey ain't no diff'rence between one three an' three ones. Count 'em fo' yo'self a see."—*Harper's Bazar.*

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THE VALUE OF BEEF TEA AS A NUTRIENT.

In our last issue we referred to this matter and proposed to show that as a *food*, beef-tea is practically useless. In the manufacture of this article various methods are adopted, with a view to ob tain the best results. Thus the amount of heat applied may be sufficient to coagulate albumen, or it may be less than that amount; or again cold water may be used to macerate the flesh. When cold water is used a larger percentage of juice is obtained, than when heat is applied, about six parts per hundred being the result from the former, and three in the latter process.

In some manufactories the whole body of the meat is macerated and strained, any portion not small enough to pass through the colander being again divided until all passes into the so-called extract. An analysis of such a preparation, when one pound of beef was used to four pints of water, gave the following results: water, 94.65 parts; albuminates and crystalline bodies, kreatin, etc., 4.25 .s; fat, 0.20 parts; salts, 0.90 parts. This comnd must be of greatly more value than the ordi- beef tea, for the whole body of the meat is in- orated in it, but the difficulty is, that where . food is not permissible it should not be allowed. sample made with *two pounds* of meat to *two* of water, macerated for four hours and subse- simmered for six hours, the analysis showed as follows: water, 98.48 parts; albuminates, and crystalline bodies, kreatin, etc., 0.90 parts; fats, 0.07; salts, 0.55 parts. In this case the compound was strained but the solid meat *débris* was not put in.

By a comparison of these two analyses it will readily be seen, how little value is to be placed upon either beef-extract or home-made beef tea when the solid parts of the meat are excluded. Dr. Hassal's experiments made long ago showed that, under the most favorable conditions, at least 14½ lbs. of meat would be required to yield enough nitrogenous material to supply the daily waste of one individual. This being the case we can see what poor results must the from the imbibition of the beef tea made from a "whole pound of beefsteak." It has been shown that Liebig's extract is valueless as a *food* by the fact that dogs fed on it died sooner than when left unfed, other conditions being the same in the two series of animals. Indie Liebig does not claim that his extract is a food at all. He states that "the greatest care is taken to exclude from his extract all fibrin, gelatine, albumen, and fat," and adds, "that its component parts do not give strength where there is none, and that to extractives and salts is due all the value it possesses; that it is to be classed with tea and coffee; and that it neither economizes carbon for our temperature, nor nitrogen for the sustenance of our tissues." He also states the only difference between ordinary beef tea and the extract is that the latter contains less water than the former.

These are facts which properly understood will prevent the exhibition of beef-tea, when *food* is necessary. If a *stimulant* only is required then beef tea has a *rôle* to play, as also it may have as a flavorer of other foods. But to give a patient, starving for nitrogenous compounds, beef tea or beef extract prepared in anyway whatever, is to give him a stone when he demands bread.

It might not be uninteresting here to note that the quality of meat used in the preparation of the various extracts is not all it might be, the enormous horns of the Texas steers shown in the engravings on the packages of beef tea notwithstanding. In a recent number of the *Edinburg Scotsman* it is stated that a seizure of diseased horses was recently made by Inspector Aplin at Newcastle-on-Tyne. The animals which were in the last

stages of decrepitude and disease, were found in a field at Tynemouth, and the man in charge on being questioned about them, stated that they were to be shipped from Shields to Hamburg, where they were intended to be converted into extract of meat. The horses were bought in Northumberland, and cost 15s. each. He would get 2s. a stone for them in Hamburg on condition that they arrived there alive. So infirm were the poor old animals that they had to be driven through Northumberland at the rate of a mile and a half an hour.

The *Medical Press* of London also states that a man at Colchester has been fined 40 shillings for driving a dying horse with cruelty. The equine was taken into port for transhipment to Antwerp, where, it seems, they boil down old screws and send the results back to English invalids for beef tea.

ANTIPYRINE IN DIABETES.

Recent observations by Germain Sée, Eichorst, and several other prominent French physicians, have apparently established the value of antipyrine in this formidable disease. It appears not only to have the power of reducing, or entirely removing sugar excreted, and of suppressing the excess of urine in diabetes insipidus, but what is of more importance, of restoring the general health, and remedying the subjective symptoms of those suffering from these diseases. This therapeutical property of antipyrine was first observed by Germain Sée, while administering it to a diabetic patient for the relief of neuralgia, and its further use with other diabetic patients proves the value of the remedy. Not only in his hands, but also in the hands of others, Eichhorst found that every case of diabetes insipidus in which he administered it was benefited or entirely cured, and many other physicians have attested its value in these diseases. Germain Sée's theory is, that the overproduction of glucose is restrained by the depression of the nervous system, brought about by antipyrine, thus diminishing the nutritive and chemical processes within the system. The source of supply must be cut off, as far as possible, by the proper antibetic diet, although he does not entirely exclude bread and potatoes, but is firmly convinced that about seven ounces of fresh bread and an equal amount of boiled potatoes should be allowed every twenty-four hours, to satisfy the craving for carbo-hydrates, and their good effects on the general health.

The dose which has been found suitable in this malady is from grs. xv. to xxv. three times a day.

We sincerely trust that further experience may confirm the alleged therapeutical value of this remedy on those hitherto intractable maladies, and that we may not be disappointed when we test them, as has frequently occurred with many other new remedies. So far as we are aware, no reliable remedy for these diseases has hitherto been known, and one on which we can depend will be a source of comfort to the physician, and an inestimable boon to the patient. It will be wise to allow the matter to remain *sub judice* until further evidence is adduced, and the remedy has been given a fair trial, before judgment is pronounced, although we trustfully and anxiously desire to find a verdict in its favor. A remedy of this character, a supply for a long-felt want, will not be long in thoroughly proving either its value or its impotency on these prevalent maladies. That its value may be established, and the alleged virtue claimed for it may not be found wanting is a consummation devoutly to be wished.

UNPROFESSIONAL ADVERTISING. AND THE ONTARIO MEDICAL COUNCIL.

The Ontario Medical Council has been endeavoring to give force and meaning to the recently added clause which gives them similar powers to those held by the Upper Canada Law Society, viz., to strike off the roll any practitioner who has been proved guilty of disgraceful and unprofessional conduct; and the committee appointed by the Medical Council has been recently at work in Chatham and Toronto. The committee consists of Dr. Day, of Trenton, Chairman—Drs. H. H. Wright, Toronto; Russell, Hamilton; Logan, Ottawa; Bray, Chatham. From the thorough and very careful manner in which this co mittee, under their able chairman, are endeav ing to carry out the spirit and meaning of t Act, the Ontario Medical Council is to heartily congratulated. Whilst it is well kno that long and disgraceful advertisements are the greatest degree pernicious in their effects u

the general public, apart from being always the work of unprincipled charlatans, it is in some cases difficult to prove and substantiate the fact by sworn testimony, and occasionally we find members of the profession who ought to know better, blaming the Council for not ridding some locality of the travelling quack, when they are unwilling to come forward and testify as to what they know concerning such; as also what practices are evidently those such as only the unprincipled and deceptive would adopt. We feel sure that the action of this committee will, in its effect, be most salutary, and many of those whose ability consists merely in writing up a flagrant and catch penny advertisement, will think it wise to draw in their horns in time. We may here express the hope that, throughout the Province of Ontario, the gentlemen who are devoting so much time and labor in this direction, will meet with that assistance and encouragement which their efforts warrant.

TRINITY MEDICAL COLLEGE—ANNUAL BANQUET.

The thirteenth annual banquet of Trinity Medical College was held at the Queen's Hotel, on the night of the 19th ult. The number of students and guests was something over 200. The chair was taken by C. B. Coughlin, who, throughout, proved an excellent master of ceremonies. The room was handsomely decorated, and every person present had reason to be satisfied with the manner in which the students managed this, *the* event of their academical year. The other officers were:—

First Vice-President; J. T. Fotheringham; Second Vice-President, A. S. Tilley; Third Vice-President, W. Doan; Toaster, C. B. Oliver; Secretary, R. McGee; Committee—H. Ghent, A. A. Sutherland, J. Crooks, W. E. Brown, T. W. Jones, B. McGill, H. Frank.

A large number of distinguished guests were present, among whom were:—Dr. Geikie, Dean of Medical Faculty of Trinity College; Hon. rge W. Allan, Chancellor of Trinity Univer-; Rev. John Langtry, Rev. M. Milligan, Mr. n Cameron, Dr. Wm. Burns, Dr. McFarlane, O'Reilly, Dr. Clouse, Dr. Sheard. On the of the Chairman sat Hon. G. W. Ross, Min- of Education; Hon. John Beverley Robinson; Aikins, Dean of the Medical Faculty of Toronto University; Mr. Walter S. Lee; Principal Dickson, of Upper Canada College; Mr. Patrick Hughes, of the Hospital Trust; Chancellor MacVicar, of McMaster University; Mr. Barlow Cumberland, Dr. Temple, Dr. Graham, Dr. Powell, Prof. Kirkland, Prof. Shuttleworth, Dr. Baines, Dr. Ryerson, Dr. Spence, Dr. Wishart, Dr. Theo. Covernton, Dr. Spilsbury, Dr. Grasett, Dr. Robertson, Dr. Gordon, Dr. Winnett, Rev. Mr. Symons, George R. R. Cockburn, M.P.

The *menu* card displayed a good deal of taste as well as humor. Shakespeare was to the fore, as well as Horace and Byron, in the mottoes of the card. The following are samples:

All human history attests
That happiness for man, the hungry sinner,
Since Eve ate apples most depends on dinner—
—*Don Juan.*

Your stomachs are too young,
And abstinence engenders maladies—
—*Love's Labor Lost.*

We sat feasting on meats unspeakable and sweet wines.
—*Homer.*

Now good digestion wait on appetite, and health on both. —*Macbeth.*

Nunc est bibendum. —*Horace.*

For the benefit of the Alumni of Trinity who were not able to attend, we give the following prescription, ordered for each guest, which may be of interest as coming from the Dean:

℞.—Mist. spt. vin. gallici. c. ss.
Ft. collyrium.
Sig.—Oj. sæpissime sumendum.

It is signed by the Dean, who every one knows is a Scotchman, but it is extremely like "Paddy's eyewater," if rendered into English.

The viands were amply discussed, and then came the speeches, which were as good in their way as were the eatables. The chairman, Mr. Coughlin, in a happy speech, full of expressions of pride in and loyalty to Trinity Medical College, quite carried away his audience by his eloquence and enthusiasm. The Hon. G. W. Ross next proposed the toast of Trinity University. Among many good things, he said Trinity had an honored record of forty years. She supplied the country with men eminent in all the professions. She follows the lines of Old Country Universities, and he was glad she still flourished. There was once a time when he had hoped to see a consolidation of all the universities of the province, but the public did not agree with him, and it was the

duty of the politician to bow before the will of the people. He hoped that the richness of the record of Trinity Medical College would continue to grow and extend.

The Hon. G. W. Allan replied in a thoughtful speech, in which he encouraged the present class to emulate the successes, and strive for a similar high honour to those which have been achieved by the sons of Trinity Medical College in the past.

Hon. John Beverley Robinson proposed the toast of Trinity Medical College. He was in his happiest mood, and brought down the house by stories well told anent the country doctor of a quarter of a century ago. Dr. Geikie replied in a forcible and eloquent speech. Decentralization in university matters, with equal rights in medicine, were the subjects of his theme. All he wanted was equal rights with all other universities, a fair field and no favor for any individual institution. No institution should get a grant or favor that all the others did not receive. The interests of Trinity were very near to his heart, and he would always fight for equal rights and cling to it with the perseverance of a Scotchman and the tenacity of an English bull-dog.

"The Toronto General Hospital" brought responses from the Superintendent, Dr. Charles O'Reilly, and Mr. Patrick Hughes, both gentlemen eliciting generous applause by their references to the good work carried on by the institution. Then came the "Learned Professions," and replies thereto by the Rev. G. M. Milligan, Mr. Barlow Cumberland and Dr. Temple. Mr. Milligan was, as usual, eloquent and humorous, but when he defended the students from unjust charges, the applause became quite deafening. The other toasts were, "Graduates," "Sister Institutions," "The Press," and "The Ladies," which were duly honored.

The dinner was in every respect a complete success, and the students of Trinity are to be congratulated upon the orderly and gentlemanly tone which characterized the proceedings from first to last.

OPENING OF A HOSPITAL IN ORILLIA.

The formal opening oi the Red Cross Hospital at Orillia took place on the 6th ult. Among the medical men present were Drs. Corbett, Shaw, McLean, McDonald, Harvie, Ardagh, Brown, Gilchrist, Campbell, Ware and Mulcahy, of Orilliia, Dr. Clutton, of Edgar; Drs. Harvie and Butler, of Coldwater; Dr. Hanley, of Waubaushene, and Dr. Elliott, of Gravenhurst.

The staff of physicians will be comprised of all the medical men in Orillia, who will in regular rotation be the visiting doctors. Any patient will have the option of selecting his own doctor from the names on the list, but would in that case be called upon to pay the regular fees. Competent and certificated nurses will be employed; in fact, nothing will be left undone that can in any way add to the comfort of patients. The permanent iron hospital beds are being imported expressly from England. The two large wards have a combined capacity of twenty-five beds, besides which, twenty-two private patients, can be accommodated.

History of the Medical Profession. — Dr. Canniff has requested us to draw the attention of our readers to the announcement made some time ago of his earnest desire to obtain information relative to the early doctors of the Province of Ontario. He would be thankful for any facts in connection with any of them, or if any would communicate to him the name and address of any descendant to whom he might apply. He has already a biographical sketch of about seventy of these pioneers of the profession, but there is a number of whom he has very little information. It is his desire to make the work as complete as possible. The following is the announcement referred to:

"The descendants of the early doctors of Upper Canada will be interested to learn that there is being prepared an historical account of those pioneer practitioners, by Dr. Canniff, the author of "The Settlement of Upper Canada." The work will give an account of the several steps in legislation to secure a proper standing of the profession from the establishment of the Province of Upper Canada up to about the year 1850; 2nd, an account of the proceedings of the Upper Canada Medical Board; 3rd, a list of the medical men during that period, with biographical sketches The doctor urgently requests that the descendant of these worthies will kindly furnish him at once with information on the following points:— birthplace and date; 2, place of medical study and the degrees; 3, time of arrival in Canada 5, places where he practised; 5, incidents in h

professional life; 6. marriage, children and death. —*The Daily Globe*, 25th Feb., 1889.

FATAL RESULT FROM NITROUS OXIDE.—Says the *Br. Med. Jour.:* Our Edinburgh Correspondent last week drew attention to a death which took place in the operating room of a dentist after the administration of nitrous oxide. The occurrence is fortunately very rare, but it seems advisable to ask whether this anæsthetic is as safe as it is usually considered to be. The patient, Lady Milne, was a woman aged 71, of stout build, and under treatment for fatty degeneration of the heart. She had been referred to the dentist by her medical man, in order to have two teeth removed and an opening made into the antrum It appears that Lady Milne very much dreaded the operation, and was heard to remark she feared she would not survive it. At 9 a.m. she breakfasted, but it seems her food remained wholly undigested, for during the performance of artificial respiration, undertaken when breathing ceased, it was ejected unchanged. The operation took place at noon. The dentist noticed whilst he gave the gas, that Lady Milne breathed very shallowly, and he begged her to inspire more forcibly, but this she failed to do, for, as was afterwards discovered, her corsets and clothing were so tightly bound round her that normal breathing was simply impossible. As soon as consciousness had gone the teeth were extracted and the antrum perforated. It was then observed by the dentist and his assistant that Lady Milne had become livid, had ceased to breathe, and her heart had stopped beating. Although artificial respiration was resort to, the tongue being drawn forward, while the stays were with difficulty slit up with a knife, and nitrite of amyl exhibited, she never showed signs of life. Medical aid was promptly summoned, but in vain. That nitrous oxide will be blamed is certain, but a dispassionate consideration of the circumstances seems to point rather to the neglect of precaution on the part of the ent than to any particular danger from the esthetic. It is clear Lady Milne died from hanical rather than from poisonous agency. sons, even with fatty heart, although of course y are the least adapted for any kind of anæsic, take nitrous oxide with impunity; but the bent posture, with absolutely loose clothing and a stomach not distended with gases and undigested food, are conditions which can hardly be omitted without grave risk. The dentist who gave Lady Milne gas seems to have regarded her statement about her weak heart as merely the expression of a highly nervous woman, but we cannot but think it is wise in all such cases to give the patient the benefit of the doubt, and adopt the precautions to which we have above alluded.

NEW BREAD FOR DIABETIC PATIENTS.—Says the Paris correspondent of the *Br. Med. Jour:* M. G. Pouchet, Professor at the Museum, describes in the science column of the *Siècle* a new food stuff for diabetic patients, containing an abundance of nitrogenous substance and entirely free from starch. All gluten bread contains a certain proportion of starch. The bread in question is made from the embryos of corn. M. Danysz, the discoverer of this new bread, has succeeded in isolating the embryo from its farinaceous endosperm, and has also been able to remove from the embryo all oily or other substance calculated to injure its flavor. After long research M. Danysz has obtained a large quantity of corn embryos; from these flour has been made which is extremely nutritious. Bread made with it is easily digested, and is said to be agreeable to the palate. In many of the Paris hospitals this bread is now used for diabetic patients.

WHITE LEAD IN ERYSIPELAS.—The use of white lead as a mask or covering in erysipelas is not new. It has been advocated for a number of years, and largely and successfully used. Dr. Sturver says, *Med. News:*—I have tried quite a number of the most highly lauded remedies, including the combination of sulphichthyolate of ammonium and lanolin, which is claimed by many to be a specific in this disease, but in my hands white lead paint has exerted a more favorable influence than anything else. It very promptly relieves the burning pain and feeling of tension which are so marked in severe cases; it limits the spread of the disease process, and forms an impermeable covering over the affected parts, thereby preventing the dissemination of diseased particles. If this disease, as is now generally admitted, be caused by pathogenic microörganisms, this power of the treatment to limit the spread of the disease germs should lead to its more general adoption.

PARIS EXHIBITION.—W. R. Warner & Co. have received a silver medal at the Paris World's Fair, being the highest of its kind, in recognition of the following claims:

First.—W. R. Warner & Co.'s Pills, quick solubility and accuracy.

Second.—Reliability and permanency unsurpassed.

Third.—Perfection in coating, thorough composition and accurate subdivision.

Fourth.—Excellence in solubility of the finished product in from 4 to 6 minutes.

Fifth.—Quinine Pills, for accuracy in weight and purity of material.

Also for Warner & Co.'s Effervescent Salts.

First.—Superior effervescing properties.

Second.—General elegance and excellence.

Third.—Stability of the effervescing quality sustained by critical examination.

This is the 13th World's Fair Medal which attest to their superiority. Physicians should be careful to specify Warner & Co.

THE INOCULABILITY OF CANCER.—The question as to the contagiousness of cancer has been receiving considerable attention during the past few years. Much has been written by experimenters, *pro* and *con*, with the result that no definite conclusion has been reached. Lately, Dr. Hanau, of Zurich, has given his experience with regard to the inoculation of cancer. In November, 1888, he transplanted two portions of a carcinomatous lymphatic gland, taken from a female rat, into the scrotum in two old rats. In one of these there was found, two months later, a general carcinomatous infection of the peritoneum. In the other, two nodules of a cancerous nature were found on the gubernaculum testes and cauda epididymis. In these new growths the structure was identical with the original growth. Dr. Hanau believes believes that the active agents in infection are live epithelial cells, and not pathogenic microbes.

J. M. RITTER, M.D., Richmond, Ia., says: My experience with S. H. Kennedy's Extract of Pinus Canadensis has been highly satisfactory, especially in the treatment of ghonorrhœa and gleet. In these lesions I regard S. H. Kennedy's Extract of Pinus Canadensis as the remedy par excellence. In one obstinate case of gleet, particularly, I obtained the very best results from the remedy as an injection; the case was one of six months' standing, the patient had consulted other physicians, but with negative results. I prescribed the Pinus Canadensis (White) as an injection, properly diluted. The malady yielded immediately, the discharge lessened, and finally yielded entirely, to the great delight of the patient.

DIPHTHERITIC SORE THROAT.—This common expression is referred to by the editor of the Indiana *Med. Jour.* as follows: "There is no such disease known to medical science. An individual either has or has not diphtheria. If the former is the opinion of the physician, let him say so; if the diagnosis is uncertain, it is also best to say that or nothing. Surely there is no excuse for the use, under such circumstances, of terms which are both professionally and popularly misleading, and which imply a belief that there is a condition which has a diphtheritic element and yet is not diphtheria."

The above would apply with equal force and truth to the old women who wear pants, are members of the medical profession, and habitually say that so-and-so "almost had typhoid fever."

NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.—The Executive Committee of this institution have established a clinic for diseases of the rectum, to be under the care of Dr. Charles B. Kelsey, for the treatment of poor persons suffering from these diseases. Dr. Kelsey will also give clinical instruction in the Post-Graduate School on this subject.

It is believed that this is the first institution in New York City to organize such a clinic, which has been long needed. The high and wide reputation of Dr. Kelsey, founded upon years of special work, will afford a guarantee that the cases will be skillfully treated. Dr. J. Blair Gibbs will assist Dr. Kelsey in this new departure.

TURPENTINE IN POST-PARTUM HÆMORRHAGE.—Mayne has used turpentine in post-partum hæmorrhage for several years (*Med. Times and Reg.*), with very good results. When the usual means, such as kneading the uterus, insertion of the hand, cold, subcutaneous injections of ergotin, etc., have proved ineffectual, contraction of the uterus followed immediately after insertion of a piece of

linen, saturated with oil of turpentine, into the uterus, and bringing it in contact with the walls; and all hæmorrhage ceased. In several cases where the patients were nearly pulseless, it acted also as a stimulant. He never saw it fail, and it is well borne by the patients.

ENDOMETRITIS.—For sub-acute cases of this malady, Terrier uses medicated pencils introduced into the uterus. He recommends, *Sem. Méd.*

℞—Iodoformi . . . . . gr. cl.
Gummi tragacanth . . . gr. vijss
Glycerini,
Aquæ destil., āā . . . . q. s.
Ut. fiant bacilla (pencils) No. x.

The pencils made according to this formula are said to be about the size of sticks of nitrate of silver. Resorcin or salol may be used instead of iodoform.

Terrier recommends the following formula for making corrosive sublimate pencils:

℞—Hydrarg. chlor. cor. . . gr. vijss.
Talc, ... ʒ vjss.
Gummi tragacanth, . . gr. xxiij.
Aquæ destil.,
Glycerini, āā . . . . q. s.
Ut cilli No. 50.

The vagina is first washed out with a one per thousand solution of corrosive sublimate, and then the pencils are introduced into the cavity of the uterus. They are prevented from slipping out by tamponing the vagina with iodoform gauze.

ANTIPYRIN IN ENURESIS. — Starting with the idea that enuresis is due to a spasm of the fibres which preside the expulsion of the urine, Drs. Perret and Devic (*Jour. Am. Med. Assoc.*) treated two cases of essential nocturnal incontinence of urine, the one aged 11 years and the other 12 years, to whom he administered from two to three grams of antipyrin per day. The first case, which was that of a boy, was cured in ten days after treatment, and the second, a girl, was cured in teen days. Even after the suppression of pyrin the enuresis was not reproduced.

ALCOHOLIC INDULGENCE.—A committee of the ish Medical Association reports: (1) That tual indulgence in alcoholic liquors beyond the moderate amount has a distinct tendency to n life, the average shortening being roughly proportionate to the degree of indulgence. (2) That of men who have passed the age of twenty-five, the strictly temperate, on the average, live at least ten years longer than those who become decidedly intemperate. From our personal observation of the amount of drinking indulged in in Great Britain, this state of facts will soon depopulate the country.

THE INFECTIVE PERIOD OF COMMON DISEASES.—Dr. James Finlayson, in the *Glasgow Med. Jour.*, tabulates the views of the latest authorities, on the period of infectivity of contagious diseases. He gives the infective period for scarlet fever as from seven to eight weeks; measles, three to four weeks; rötheln rather less; mumps varies from two to four weeks, and whooping-cough is usually put down to eight weeks or more. The paper is a very instructive one, and every general practitioner would do well to keep a copy of it always ready for reference.—*Med. Record.*

FOR DANDRUFF.—Dr. A. J. Harrison, of Bristol, recommends, *Le Prog. Méd.*, the following salve for dandruff:

℞—Caustic potash, ... gr. viij.
Phenic acid, ... gr. xxiv.
Lanolin, } . . . āā ʒ jv.—M.
Cocoanut oil, }

This preparation should be rubbed into the scalp morning and evening. Complete cure is usually effected in one to three months.

HUXLEY says, *apropos* of the "R" in September, that in the consumption of the delicious bivalve, "Very few persons, I suppose, imagine that when this slippery morsel glides along the palate, they are swallowing a piece a piece of machinery far more complicated than a watch."

Chas. Chadwick, Otis R. Wyeth, Louis A. Schoen, Geo. J. Schoen, Chas. F. Hermann, Geo. Eyssell and Horace L. Roy, have been fined $500 and costs for counterfeiting a trade mark preparation known as "Bromidia."—*Kansas City Star.*

NIGHT SWEATS OF PHTHISIS.—Rosenbach recommends (*Schweiz. Corr. Bl.*) for this trouble the application of an ice bladder to the abdomen for a few hours during the night. It is well borne and more efficacious than atropine or other remedies.

Canadian Graduates Abroad.—We are glad to learn that Dr. G. S. Rennie (Trin. '89), succeeded in taking the highest number of marks at the recent L.R.C.S. Ed. examination. Dr. W. A. Dixon (Trin. '89), stood third on the list.

The degree of D.C.L. was conferred upon Dr. Geikie at the recent Convocation at Trinity University.

Books and Pamphlets.

Through The Ivory Gate: Studies in Psychology and History, by William W. Ireland, M.D., Edinburgh, Corresponding Member of the Psychiatric Society of St. Petersburg, etc. Edinburgh: Bell & Bradtfue Toronto: Carveth & Co. Pp. 311. 1889.

This work by the gifted author of the "Blot upon the Brain," should be well received by those interested in psychological researches. These studies with the histories are intended to be a continuation of the papers on Mohammed, Joan of Arc, Mohammed Toghlak and others in the above mentioned work. This present work contains historical sketches of the lives of Swedenborg, King Louis of Bavaria, Charles J. Guiteau, Louis Riel, Thebaw of Burmah and others. The opinion of the author, that "all the characters mentioned suffered from some mental derangement," that "they were led away by delusions or uncontrollable passions from the right comprehension of things or the right line of conduct," would appear to be clearly made out. We commend the work to all interested in psychology.

Wood's Medical and Surgical Monographs—Consisting of original treatises and complete reproductions in English, of books and Monographs selected from the latest literature of foreign countries, with illustrations, etc. Published monthly at $10 per year. Single copies, $1. New York: William Wood & Co., 56 & 58 Lafayette Place. Toronto: Vannevar & Co.

The October and September numbers of these excellent works contain respectively:—The Influence of the Male Element upon the Female Organism, by John Brown, M.D. The Internal and External Temperature of the Human Body as Modified by Muscle-Kneading, by A. Symons Eccles, M.B. The Diseases of the Breast, by Thomas Bryant, F.R.C.S. On the Surgery of the Knee-Joint, by C. B. Keetley, F.R.C.S. Aids to Ophthalmic Medicine and Surgery, by Jonathan Hutchinson, Jr. Bacteriological Technology for Physicians, by Dr. C. J. Salomonsen.

The Principles and Practice of Surgery. By John Ashhurst, Jr., M.D., Professor of Clinical Surgery in University of Pennsylvania, etc. Fifth Edition, Enlarged and Revised, with 642 Illustrations. Philadelphia: Lea Brothers & Co.

Any work from the pen of so well known an author, requires little more commendation; and the present work on surgery is ahead of previous issues. It is a clear and concise, but comprehensive work, setting forth the modern modes of surgical practice. It also contains very valuable information relating to diagnosis. The diseases of the Eye and Ear are well and ably handled, and in our opinion enhances the value of the fifth edition. The work is abundantly illustrated, and the subject matter handled in a masterly manner. We highly commend this work as one of the best text books on surgery with which we are acquainted.

The Physician's Visiting List For 1890. Philadelphia: P. Blakiston, Son & Co. Toronto: Carveth & Co.

This always popular visiting list has now reached its 39th year of publication. It contains much useful information, among which may be mentioned a list of new remedies; Posological Table; Sylvester's method of producing artificial respiration; Examination of Urine; Disinfectants, etc. We bespeak for it a continuance of past success.

The Medical News Visiting List For 1890, by Lea Brothers & Co., Philadelphia. Toronto: Carveth & Co.

This list is now entering upon its fifth year, is established on its merits, and requires no encomium from us. It has been accepted by the profession as one of utility and convenience. The list for next year is clearly an improvement on those of former years. It contains over forty pages of memoranda, in fact is a *vade mecum* of no inconsiderable value.

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HYPERTROPHIC RHINITIS, OR HYPERTROPHIC NASAL CATARRH.*

BY PRICE BROWN, M.D., L.R.C.P., TORONTO.

The mucous membrane of the nasal passages differs from all other mucous membranes. 1st, in being deposited or built upon rigid walls; and 2nd, in the tract being intended for the transmission of respiratory currents only. It follows, therefore, the foundation of the membrane being stationary, and the epithelial surface free from the cleansing power of friction, that the results of inflammation have a tendency to accumulate, the hypertrophic processes being almost unimpeded.

In this disease we have a true hypertrophy of all the normal elements of the mucous membrane. The principal changes, however, are found in the corpora cavernosa or deeper layers of the membrane. Here we have an abnormal deposit of connective tissue elements, together with infiltration by immense numbers of new cells. At the same time there is morbid proliferation of the surface epithelial elements. The glandular structures are likewise involved, though to a less extent. As the hypertrophy progresses, new blood vessels are formed, which in turn still further produce excess of growth. The result of the combined processes is, that the whole of the mucous membrane affected becomes materially thickened; and it throws out an increased secretion of mucous, which takes a somewhat purulent character, by its admixture with newly proliferated cells.

This thickening or swelling is not, however, usually distributed. The parts affected become irregular; some parts more hypertrophied than others. Those chiefly involved are the free surfaces of the turbinated bones; the inferior being most frequently affected, the superior least, and the middle one occupying a position, both with regard to frequency and severity, between the other two. Quite frequently, also when the hypertrophy is severe, the septum likewise becomes involved.

The venous sinuses over the posterior portions of the middle and lower turbinated bones being larger than in the other localities, these parts are likewise sometimes affected with hypertrophy, though not so frequently as the middle and anterior portions. Complete stenosis as a result, however, is more frequently found in the posterior, than the anterior or middle regions.

Etiology.—In the great majority of instances, hypertrophic rhinitis arises either from a succession of attacks of acute rhinitis, or as a continuation or result from chronic rhinitis. Hence the initial factors of these diseases are the direct causes of the hypertrophy. In some instances the disease is said to be idiopathic in its origin. Improper treatment of nasal diseases will likewise lead to hypertrophy, and I have known it produced by injury.

Symptoms.—One of the most marked symptoms of this troublesome disease is interference with nasal breathing. As the disease advances, the thickened membrane becomes much more sensitive to the effects of cold, damp or other irritants, resulting in still further thickening of the already hypertrophied tissue. When in this condition, there is often complete occlusion by the mere distension; while in advanced cases the true hypertrophy may be sufficiently great to produce permanent stenosis.

Any position favoring gravitation will sometimes produce temporary stenosis when hypertrophy exists. For instance, lying on one side will occlude the dependent nasal cavity. Lying on the other will relieve it, the occlusion being reversed; while the supine position may result in occlusion of both nostrils.

One of the physiological functions of the nose being to purify, moisten and regulate the temperature of the air of respiration, the occlusion of that organ necessitates the breathing of impure air of diverse temperatures. The result, in many cases, being the formation of chronic pharyngitis and laryngitis; and when a predisposition to lung disease exists, the development of tuberculosis also.

The voice acquires a nasal twang; and when

* Before the Toronto Medical Society, Nov. 12, 1889.

the throat is also affected, the tone becomes somewhat muffled. The eyes may become red and watery from pressure upon the nasal duct; hearing may be compromised by occlusion of the Eustachian tubes; the sense of smell may be suspended or destroyed; and the face, from the continued breathing through the open mouth, loses its natural expression. I might add that periodical frontal headaches are often complained of.

The nasal discharges are usually largely augmented as well as changed in character. Thick viscid mucous gathers in the tortuous nasal cavities, and owing to the occlusion is very difficult to be got rid of. The whole of the glands, in connection with the inflamed tissue, pour out an abnormal amount of secretion of a moucous or muco-purulent character. This accumulates in the sinuosities of the turbinated bones, forming fetid masses or scabs, and rendering the breath offensive, the drainage backwards often extending the catarrhal disease both to the pharynx and larynx.

On examination of the parts anteriorly, the mucous membrane will usually present a somewhat reddened appearance. The lower turbinated bone, covered to a more or less extent with mucoid discharge, will project towards and sometimes impinge upon the septum; while the surfaces of both may be somewhat irregular. On pressing the parts with a probe, the swelling becomes indented, and but sluggishly resumes its wonted contour. The lower turbinate as a rule hangs downwards as well as toward the septum; while the middle one when hypertrophied, projects in a rounded manner directly inwards. Hypertrophy of the upper turbinated does not usually occur; when it does, the enlargement is limited.

A thorough posterior examination is attended with much more difficulty than an anterior one. Still by the use of the rhinoscope, the posterior ends of the upper and middle turbinates, and the upper part of the lower one, can in many cases be seen, as well as the greater part of the septum. When hypertrophy exists, the membrane will be found of a grayish color, and projecting into or filling entirely the posterior channel. This may be confined to the lower turbinate or may involve the middle one also—the septum frequently taking part in the abnormal thickening.

Some authorities divide posterior hypertrophies into two divisions, white and purple; the former being harder and more frequent than the latter. The chief difference between them consists of the soft venous character of the purple variety.

Diagnosis.—The anterior diseases which might be mistaken for hypertrophic rhinitis, are acute rhinitis and simple chronic rhinitis. The former of these two is diagnosed by its recent origin, smoothness of surface, greater sensitiveness, higher color, and quicker resilience on pressure. The latter, by the general evenness of the inflammatory action, there being an absence of the irregularities of hypertrophy. There is also less tendency to stenosis; and at the same time, a quicker response to ordinary local treatment.

Posterior hypertrophic rhinitis might sometimes be confounded with posterior nasalpolypi, on account of similarity in color. The polypi, however, are softer to the touch, more movable, and exhibit a brighter and smoother surface.

Prognosis.—Rhinal hypertrophy rarely if ever assumes a dangerous form *per se*. In some cases it progresses to complete occlusion, remaining in this condition indefinitely, or until past middle life, when it gradually recedes, leaving the parts almost in a normal condition again. In the majority of instances, however, if not relieved by surgical treatment, it will, after lasting for years, pass on into atrophic rhinitis, with all its distressing and in many instances, loathsome results. The sense of smell may be completely lost, taste materially affected, and hearing in a great measure destroyed.

Treatment.—If hypertrophic rhinitis came under observation during the early stages of its development, local medical treatment would in many cases effect a cure. Unfortunately, however, the hypertrophy is usually far advanced when the patient presents himself for treatment. It is when partial or complete stenosis so interferes with the natural respiratory effort, and with the normal voidance of the mucoid discharges, as to make life miserable and the breath offensive, that the patient usually seeks for relief. In these cases operative interference becomes necessary, to produce anything like a good result.

In the early stages, mild alkaline sprays o. douches are very effectual in cleansing the rhina cavities, being applied both anteriorly and posteri orly as required. While fine sprays may be use cold, douches and washes with the posterior syring

should be tepid. After cleansing, mild astringents applied in the same way, and continued regularly for several weeks, will sometimes so check inflammatory action and so constringe the parts, that the hypertrophy will gradually be absorbed.

Operative interference when necessary, may be accomplished in various ways. The means at our command consisting of caustic acids, cold and cautery snares, transfixing needles, saws, galvano-cautery knife, etc. Of these, the first and the last meet with the most general favor and the largest use.

Of the acids, the most highly recommended are the nitric, glacial-acetic, and chromic. Nitric being the most destructive, requires much care in its application. If applied in anything but small quantities it is liable to produce deep-seated ulceration. It is, however, very effectual in the destruction of hypertrophied tissue, and properly guarded, will do good work. To use it, a probe is wrapped with absorbent cotton and then dipped in the acid, any extra drops being removed by a blotter. Glacial-acetic acid has the reputation of being a safer agent, but being less powerful requires many applications to produce a good result. Seven or eight touches, at the interval of a week, will be required to produce as much effect as one of nitric acid. Both acids are applied in the same way.

Of all three, chromic acid is most popular, and is the only one that I have personally made use of. A convenient method is to heat the end of a probe or even stilette of a catheter in a spirit lamp and apply it to the crystals of the acid. Enough will adhere for one or two applications. Chromic acid gives very little pain; and three or four touches at intervals of several days, will often give very good results, As with the other acids named, a saturated solution of bicarbonate of soda can be applied, to neutralize any excess of acid. Before the use of any of them, it is better to wash out the nasal cavities with the alkaline spray. Cocaine can also be used, as in the more serious operations, produce local anæsthesia.

The cold snare is more theoretical than practical, and rarely used, its place being taken by the galvano-cautery snare. The latter is serviceable large posterior hypertrophies, when the growth too extensive to be removed by the cautery fe; and of course necessitates the use of the scope. It is also used in large anterior hypertrophies. In these cases the transfixing needle is employed to elevate and steady the growth, during the manipulation of the cautery. The nasal saw and Woakes' plough are both of them occasionally used, when the hypertrophy extends beyond the corpora cavernosa to the turbinated bones themselves.

The galvano-cautery, however, has many advantages over all other methods, in the treatment of nasal hypertrophies. Not only does it produce comparatively little pain, and even this is within our control, but we can definitely limit both the depth and extent of its action. Another important feature of electro-cauterization is the exceedingly limited amount of local inflammation which it produces. Even after severe operations, patients rarely complain of discomfort, after the immediate effects are over.

It is a method of treatment, however, which requires the utmost care as well as considerable skill on the part of the operator. Although by means of the nasal speculum and the rhinoscope, he may see to place the electrode upon the hypertrophied tissue sue, yet the depth and extent of the burning in each case, must be largely controlled by the sense of touch. Too broad an application would destroy too extensive a surface of the ciliated epithelium; while too deep a burning would penetrate the corpora cavernosa, lay bare the turbinated bone itself, and produce a sloughing ulcer. It is as well to remember also, that the application of any of the escharotics to the nasal membrane, may in some cases give rise to erysipelas of the face. It is satisfactory to know, however, on the authority of Bosworth, that with the galvano-cautery the risk in this respect is comparatively slight.

Clarence Rice tells us that almost any effect can be produced by this instrument, the result being dependent altogether upon the manner in which it is used. Its potency can scarcely be over-estimated, varying from the gentle action of a simple astringent, all the way up to a destructive agent, accomplishing more than the wildest enthusiast could desire. Rice cites an instance where the hypertrophy had been removed, but dense bands of cicatricial tissue had taken its place. The nostrils were rendered too wide, the glandular action of the mucous membrane destroyed, and dry pharyngitis, with recurring neuralgia, was the lasting result of over zealous treatment.

Knight also gives an instance, where large posterior hypertrophy had been removed too extensively by the surgeon ; the result being that, after the first few months, the patient became a permanent sufferer from pharyngitis sicca.

Shurly says that too decided surgical interference, either by galvano-cautery or other means may produce permanent atrophic nasal catarrh.

It was rash use of this excellent method of treatment which placed the electric battery in disuetude for so long a period after it was added to the rhinologist's armamentarium. In some instances, the septum was perforated, in others the turbinates destroyed ; and thus the curable was transformed into the incurable by the use of an instrument which is now considered to take the highest rank for all operations within the nasal cavity.

During the last few years, the use of the galvano-cautery has been established upon a sure foundation. Recent improvements enable the operator to illumine almost the entire nasal cavity ; while the experience of specialists, so widely published, enable him to avoid the pitfalls that have been so disastrous to others. Voltolini, Michael, Sajous, Morell-Mackenzie, Rice, Shurly, Bosworth, Delavan, in fact all the leading laryngologists strongly support its use ; and I feel sure it occupies a place in rhinology from which, it can never be removed.

My own treatment of the hypertrophic tissues, during the present year, has been almost exclusively by galvano-cautery ; and I will close by giving a short history of the cases as they occurred.

January 30th, Case 1. Mr. F. J. P., journalist, married, age 31 years. Father and mother died of consumption. Personally tolerably healthy ; has had catarrh for two years, chiefly on right side, with partial stenosis ; has had hæmorrage from right nostril every day on using handkerchief, for three or four weeks. On examination I found two dark polypi hanging from middle turbinated bone. After applying a solution of cocaine, I removed one by snare. There was considerable hæmorrhage. This was so great that I did not remove the second polypus, but gave an astringent solution to be applied by patient. Two days later he returned, and I removed the remaining one with forceps, and applied chromic acid to the root.

I then discovered a large hypertrophy of middle turbinated, immediately behind the attachment of the polypi, and as the patient was going away on business for some time, I delayed operating until his return.

On march 5th, I used the galvano-cautery, passing the knife longitudinally over the growth in two places, from back to front, at white heat. There was not much suffering and after local treatment for some time, patient made a good recovery. The hæmorrhage did not occur again, the catarrh was greatly relieved, and there has been no return either of polypi or hypertrophy.

March 1st, Case 2. Mrs. R. D., age about 30 years. Has been suffering from catarrh for two years, with progressive stenosis of right nasal cavity. There has also been frontal headache and offensiveness of breath.

On examination, I found hypertrophy of septum and inferior turbinated to such an extent, that it was impossible to pass a probe through without pain. Superficial ulceration, produced by pressure, existed where the parts were in contact. There was also hypertrophy of the middle turbinated, though to a less extent.

After cleansing, I applied by spray and absorbent cotton a four per cent. solution of cocaine. With difficulty I passed the cautery knife backwards between the lower hypertrophies, and cauterized from behind forwards ; making two cauterizations at the one sitting upon the lower turbinated and septum. The subsequent treatment consisted of sprays and the local application of ol. petrol. Three weeks later I made a single application of the cautery to the middle turbinate. The patient did not come as regularly afterwards for treatment as she should have done ; still the result was complete removal of the stenosis, abatement of the headache, and subsidence of the catarrhal symptoms.

Sept. 10th, Case 3. Mrs. W., age 44, family history good. Has had naso-pharyngitis for a considerable length of time, with impediment in breathing through right nasal cavity. A year ago, her family physician told her she ought to go to a specialist, to have a growth in the right naris removed. On examination I found hypertrophy of the right turbinate. The application of the cautery was followed by considerable reduction. Four weeks later I made a second application ; subsequent treatment similar to that in former

cases. In this instance the hypertrophy and catarrh have both disappeared, and the patient can breathe through one nostril as well as the other.

Sept. 3rd, Case 4. Miss W. D., age 21; family history good. Has had nasal and naso-pharyngeal catarrh for more than a year, confined chiefly to the right anterior turbinate.

At first, I confined the treatment to the free use of sprays, hoping that their alterative and astringent character would have the effect of producing absoption of the hypertrophy. There was considerable amelioration of the catarrhal symptoms; but two weeks later, I found that to produce permanent benefit, the cautery would have to be applied. This was followed by a result similar to that in the cases already mentioned.

Oct. 22nd, Case 5. Mr. T., from Ontario Co., retired farmer, age 55; family history asthmatic. Has had asthma himself for more than a year. About the time of its commencement, he took a cold in the head which has been continually getting worse up to the present time. He spent several months during the early part of the year in the North-west, hoping that the climate might prove beneficial to both the asthma and the head trouble. In this he was disappointed, the latter being aggravated by the time of his return.

In this case the stenosis on the left side was almost complete. By strenuous effort he could inhale through the left nostril; but to exhale through it was impossible. On the right side breathing was slightly freer.

On examination, I found a nasal polypus on right side, and also enlarged middle turbinated bone. On the left, examination revealed complete occlusion—the middle and inferior turbinates being both very much hypertrophied. On posterior examination with the rhinoscope, I found gray hypertrophy on the left side also; the enlargement extending out through the choana, and hanging into the naso-pharynx. Its position accounted for occasional power of inspiration.

ter applying cocaine, owing to the limited e, I removed the polypus with forceps; and applied the galvano-cautery to the hyperhy on the same side. I would have preferred erring operation on the left side; but Mr. T. ng anxious to return home as soon as possible, sted upon immediate treatment. Consequently ried the cautery without delay to the anterior hypertrophies of both the middle and inferior turbinates on the left side, having first anæsthetized the parts with an eight per cent. cocaine solution.

Two days later, with the aid of the rhinoscope, I passed the cautery blade freely over the posterior hypertrophy, also touching the thickened septum of the posterior choanæ. Subsequently he came twice a day for local treatment.

When he left for home on the 29th, the raw surfaces had not entirely healed; but the stenosis had completely disappeared. He could, after spraying out the discharges, breathe with perfect freedom through both nostrils; and during the last two or three days the attacks of asthma had not been of the usual severity. Of course I gave him local treatment to carry on at his own home, until his recovery would be complete; and he promised to return, if the result was not as satisfactory as we desired.

Remarks.—There are several things in connection with the history of these cases, which are perhaps worthy of note. In eighty per cent. of them, or in four out of the five, the hypertrophy was confined to the right side; and even in the fifth, the right middle turbinated was involved. I might also add, that in two other cases that are at present under treatment for nasal disease, the difficulty in each of them is chiefly on the right side. In looking over the medical literature at my command, I have not noticed the comparative frequency of hypertrophy on the two sides referred to. Consequently, I am unable to say whether my own experience is merely a coincidence or not.

In this connection, I might also refer to an article read by Dr. Major, of Montreal, at the last meeting of the American Laryngological Association, and published in the New York *Medical Record* for August. The title was "The Relation between Facial Erysipelas and Erythema on the one hand, and Intra-nasal Pressure on the other." The author expressed the view, founded on his own personal experience, that these skin diseases were often produced by the internal hypertrophies, and that the removal of the latter would be followed by the spontaneous disappearance of the skin disease. In none of the cases that I have reported, was there any appearance of erythema, either before or at the time of treatment. Further observation may be attended by a different result.

Note to Case 5.—Four weeks after leaving the city Mr. T. wrote me that while the asthma was only slightly improved, he could breathe through both nostrils as well as ever.—P. B.

One more remark in reference to the last case. The theory has been advanced recently by eminent rhinologists, that there is a direct relation existing between intra-nasal pressure and asthma. In his case the hypertrophy and asthma appear to have originated about the same time. Did the former and the latter occur as a sequence of cause and effect? That the asthmatic symptoms were less severe during the last days of his treatment, appear to point in that direction. Still the case is too recent to base any conclusion upon. I hope, however, to be able to report upon this matter at some future time.

PHYSICAL EDUCATION.

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(Continued from December number.)

The value of physical exercise is not limited to its production of muscular power; it is the best means available for strengthening and keeping in health the delicate and important structures which encase the vital organs, and on whose good development the health and ability of the organs must greatly depend. It is as valuable to him who works with his brain, as to him who works with his hands, because it will enable him to prolong and sustain his labors with safety to himself and increased good to his fellow-men. It is in childhood and youth while every tissue and organ is plastic, changing, and capable of change, that physical no less than mental and moral culture should be obtained. The strong limbs and shapely frame, the strong heart and ample lungs, in the well-proportioned and elastic chest place a premium upon the mental and moral power of their possessor in every work of life.

Of the many forms of mal-growth, to be found, on enquiry, in every school, all are capable of improvement or rectification by well-chosen, graded systematic exercise. By the use of the parallel bars, clubs and other means calling into play the thoracic muscles, the hollow chest may be rounded out and its growth increased three or four inches in as many months. When the shoulders are rounded forward and the anterior chest wall is made to restrict the space allotted to the lungs, the muscles which should hold the shoulders in place may be taught to do their duty and be imbued with new strength for their performance; the spine which is no longer erect, but which has yielded to the superincumbent weight because the muscles are no longer able to keep it erect, may resume its normal, graceful curves by re-educating the muscles to the duty so long forgotten.

Long-continued attention to physical exercise, guided by a knowledge of the laws of physiology, is capable of doing much to counteract disease, and to remedy or alleviate its dire effects. Blaikie, a well-known American athlete, an oar in a Harvard crew, and a writer on this subject, was considered a hopeless consumptive when he first went into training. Dr. Winship, who lifted 3,000 pounds, was but a puny lad, and commenced training for the avowed purpose of fitting himself to punish an older student who had treated him badly. Especially in Europe is this a recognized mode of treatment in various forms of chronic disease, in deformities arising from general weakness, and resulting so frequently from faulty positions assumed by girls and boys, and especially when at school. Cases that were formerly treated with but very unsatisfactory results by means of shoulder and spinal braces, and other apparatus for correcting faulty, acquired positions, are now affording the happiest results through the use of well-chosen exercises, selected according to the needs of the case, and graduated by the ability and progress of the patient. In pursuance of this method, when the body has been set free from unphysiological restraints, the illused or unused muscles have, more or less perfectly, resumed their proper functions, have increased in volume and power, the form has become more erect, the chest acquired greater power of expansion, and th entire bearing and physique have greatly improved

McLaren, of Oxford, took charge of twelv officers of the British army to qualify them as instructors in gymnastics, and carefully ascertained and registered the development of each at th commencement of his course of instruction, and a certain intervals afterward. They ranged betwe

19 and 29 years of age, between 5 ft. 5 in. and 6 ft. in height, between 128 lbs. and 174 lbs. in weight, and had been in the service of the army from 2 to 12 years. The muscular increase of arms and shoulders, and the expansion of the chest was such as to have a ludicrous and embarrassing result, for before the fourth month, several of the men could not get into their uniforms, jackets and trousers, without assistance, and when they had got them on they could not get them to meet down the front by a hand's-breadth. One of these men had in four months gained five inches in growth of chest. Who shall estimate the value of that gain of five inches to the working capacity of the individual, and to his power to resist disease. It means five inches more space for the work and development of heart and lungs. This is not all. Before such a gain could be made the whole frame-work of the system must have partaken of the benefit, and every organ within the body have been proportionately strengthened. The greatest improvement occurred in those who were the youngest. McLaren adds: "There was one change—the greatest of all—to which all other changes are but means to an end, are but evidences more or less distinct that this end has been accomplished, a change which I could not record, which can never be recorded, but which was to me, and to all who had ever seen the men, most impressively evident, and that was the change in bodily activity, dexterity, presence of mind, and endurance of fatigue; a change a hundredfold more impressive than anything the tape-measure or the weighing-chair can ever erveal."

The association of the physical, mental and moral is a natural one, and unchangeable in its essential principles. It was expressed in Juvenals well-known line, "Mens sana in corpore sano." At this juncture in our educational development, when we are laying the foundations i his young nation upon which we hope to build ɜdifice worthy in some degree of our ancestry, . reflecting the light and influences that have ıe to us through the ages, the acknowledgment he relationship which exists between the mate- and spiritual, the physical and mental would ɔr a better appreciation of the importance of lth and hygiene in their widest and fullest 'ficance, would afford the best antidote for many of the spiritual-isms that are discrediting the intelligence of the close of this century, and would remove barriers which are now standing in the way of our attainment of that full-orbed individual development which is the only basis upon which can rest national greatness. The wide-spread diffusion of physical culture would be one of the most potent factors for increasing the public health and longevity, diminishing disease both by prevention and cure, augmenting the world's power for work by addiug to the usefulness and activity of the individual, and promoting the material prosperity, the happiness and the morality of mankind Vigorous and systematic muscular exertion has a powerful influence in developing the entire character, it favors the exercise of self-denial, perseverance and endurance; it strengthens the will and confers a consciousness of increased power; it begets self-confidence, resolution and courage; it subdues the passions and elevates the spiritual and physical energies.

Of the 147 Cambridge men who constituted the crews of 1829-1869, 28 % attained to the highest academical distinction, showing that mind and muscle are not unequal yoke-fellows, but that they are well able to work together with mutual and reciprocal advantage. Of the aquatic champions mentioned by Dr. Morgan in his book on "University Oars," there were three bishops, two judges, one renowned historian, and many others of intellectual distinction. At Oxford, the general average of class-men for a given time was about 30 % at examinations, but cricketers attained 42 % and rowing men reached 45 %. The best freshmen crew that Yale ever had was made of ten men and a coxswain, only one of whom was below the first scholarship division, and he was in the second at a time when tbere were three divisions.

Dr. Beddon, in a paper entitled "The Stature and Bulk of Man in the British Isles," says: "If we examine only a single race or reputed race at a time, we shall find that wherever that race attains its maximum of physical development, it rises highest in energy and moral vigor."

Of persons who pass the age of 20 years, the average age attained at death is about 50 years; but in a list of 500 of the greatest names in history made for the purpose of finding the age at which they did their best work, it was found that the average age attained was about 62 years.

Another list of 240 illustrious names, gives their average age as 66 years. The great men of the past have had not only good brains, but good bodies, and the time given to physical culture was productive alike of increased tenure of life and of the highest intellectual attainment. Gladstone has his private gymnasium, and is found regularly taking outdoor exercise, and especially at his favorite pastime—felling trees. On the morning of the day when he introduced his measure relating to Home Rule for Ireland, and when the whole world was his audience, the first hour after rising was spent in his gymnasium. Bismarck has always been devotedly fond of sports, and is as earnest in their pursuit and advocacy as in his work of diplomacy.

It has been found at Harvard that students take about the same rank in acquired gymnastics as they do in their regular studies. Brain and nerve substance are behind every well directed movement, indeed the association is so intimate that it is impossible to assign to each, *i.e.*, to muscle and nerve, its exact share in the result. Du Bois Raymond has shown, from the standpoint of a comparative zoologist, the necessary connection between brain and muscle, and that by far the most marked influence of physical exercise is upon the nerve centres. Gymnastics, fencing, riding, swimming, calisthenics, are as much exercise of the cord and central nervous system as of the muscles and joints. The gracefulness of every movement depends as much upon the proper coördination of the various groups of muscles as upon their individual power; and the power of coördination or power to determine harmonious action is the special work of the nervous system. The gray matter of the brain, *i.e.*, the active portion in which are located the centres that control speech, action and thought, is at work, equally with the muscles, in securing harmonious movement, is exercised at the same time and is the gainer through the law of self-improvement. Faculties, functions and organs grow and are strengthened by exercise, and are weakened by disease. The child develops brain every time it makes a well-directed effort to grasp the object of its desire. The movements of the child are as essential to the development and well-being of its brain, as the integrity and health of the brain are to the growth of its hand.

In this work, *time* is an important element. Franklin's theory that intense energy in action for a short time is equivalent to slight force acting through a much longer period, is not sound or safe doctrine.

All-important as it is that boys and young men should give more attention to the perfecting of the body, yet it is to the girls and women that this subject should be of greatest interest. Gail Hamilton says: "A girl can go to school, pursue all the studies, and know them—not as well as a chemist knows chemistry, or a botanist botany, but as well as they are known by boys of her age and training, as well, indeed, as they are known by many college-taught men—enough at least to be a solace and a resource to her; then graduate before she is eighteen and come out of school as fresh and eager as she went in." No doubt this is strictly true, and yet how many there are who fail to realize this fortunate result, not from any inherent unfitness for the work to be done, nor because in any way inferior mentally or physically to young men and boys of the same age; but because, *first*, that custom has imposed habits of of dress that are injurious; *second*, that the temptation is greater to live within doors, deprived of sunshine, fresh air and exercise; and, *third*, because the laws of nature demanding special attention during the years usually devoted to school, are nearly always ignored.

That the type of breathing in woman is not the same as in man, that in the former it is nearly altogether upper thoracic, and in the former general, calling into play the lower portion of the chest as well as the upper, is manifestly the result of a long period of dressing in such a manner as to constrict the lower portion of the chest and hamper its movements, and is a potent factor not to be omitted in recounting woman's disability. The temptation to live indoors should be met by the regular pursuit of games and exercises that are adapted for boys and girls alike. The consideration of the third point brings up the question of the co-education of the sexes, which has been considered as an intellectual problem, and as a social problem, but which for its effective solution requires the knowledge of the physiologist. In the matter of the intellect, no teacher calls in question the statement that the girl is the boy's equal; so far as concerns morality, there is abundant testimony that young men and women, as

as boys and girls, are more amenable to discipline under co-education. Dr. Weir-Mitchell says: "The time taken for the more serious instruction of girls extends to the age of eighteen, and rarely over this. During these years they are undergoing such organic development as renders them remarkably sensitive. . . . To-day the American woman, to speak plainly, is unfit for her duties as woman, and is perhaps, of all civilized women, the least qualified to undertake those weightier tasks which tax so heavily the nervous system of man. She is not fairly up to what Nature asks from her as wife and mother. How then will she sustain herself under those still more exacting duties which now-a-days some are so eager to have her share with man? In consequence of the great neglect of physical exercise and the continuous application to study, together with various other influences, large numbers of our American women have altogether an undue predominance of the nervous temperament."

One objection to our present methods of education of girls is the unintermitting demand for brain work. It is impossible that the system should, at the same time, do two things well—develop the body in all its wealth of special characteristics, and at the same time perfect the intellectual processes. Good productive thought implies a healthy brain, and a healthy brain implies an abundant supply of good healthy blood. But this cannot be supplied to the brain without detriment to the functions of the developing physical organism.

Throughout our colleges and schools there is no greater need to-day than that systematic education for the body be given to both boys and girls and to young men and women, such as will prevent the more intellectual, ambitious and worthy from falling a prey to the disabilities which hamper their usefulness, and hand down to posterity the highly-wrought brain and feeble constitution which are so rapidly increasing the numbers that fall as tims of insanity, and cause the present to be a emarked—as never was any age before—by dis- sof the nervous system. Our present methods of cation provide for the non-survival of the fit- . If you find the boy or girl of clear brain, h ambition and lofty motive, you find parents teachers alike urging that all attention be n to the cultivation of the mind, to the neglect of the body; and the average result is that those whom Nature endowed most favorably with the graces of head and heart, either fail in the race or increase in their person and in their children the number of those whose over-wrought nervous organization is characteristic of this age.

Though our children have grown weary, and some have been mentally and physically stunted and others have gone through life bearing its duties and responsibilities as if they were burdens, and have plodded on with discordant nerves, steps that showed no buoyancy and with health much below par, while others have let go their hold upon life before its normal cycle had passed—all through the one-sidedness of our education and in satisfying the demands of the machine; yet there are indications that wiser counsels are prevailing, that we are coming to understand that the beauty and power and usefulness of the intellectual, the moral, and the spiritual have a natural relation, that may not be ignored, to this physical tenement which is a necessary concomitant of our existence here. The girl who learns to swing the clubs, use the vaulting pole, run a mile without tiring, poise gracefully in every natural position, and becomes free from every restraint that hampers and retards the healthful exercise of important organs, becomes thereby the honored bearer to humanity of greater blessings than she who acquaints herself with all the rules of art. The boys and girls who are learning the elements of physiology and hygiene, and who through practice are learning the use of every group of muscles and due discipline and control of the nervous system, who are securing for themselves due development of important tissues and organs, are not they who will be most likely to fall victims to the wiles of the quack in science, politics, or religion, and will not make recruits to fill up the ranks of the various isms and fads and frauds that abound in our time. It has been shown that they who give most attention during their school days to physical culture are not drones in the recitation room. They are full of life and vigor, are the influential men upon the campus and in society, but especially are they the successful and aggressive men in after life. Let us, in our young country, build up a system of education commencing with the children and going up through every grade of school and college life,—a system that will be as broad as the needs

of the human organism, as free as it is now trammelled, that will produce not a body, not a soul, but a man educated for manhood, a woman educated for womanhood, and both for humanity.

CLINIC BY WILLIAM PEPPER, M.D.

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AN OBSCURE CASE OF ABDOMINAL PAIN COMPLICATED WITH MORPHIA-EATING.

In the search for the truth in obscure and uncertain cases, I think that far too little importance and emphasis is placed on the "facies" of a patient by the rank and file of physicians. The face if rightly read may be an open answer to many an otherwise unsolved puzzle. We can learn much from a man's expression if we will but look. For example, here is a man whose face which at once attracts and interests me, will prove a clue, I think, towards the solution of his hitherto unexplained case. We are told that he has been unable to work for nine years and for the major part of that time has been in bed, owing to an illness which has lasted that period. But his complaisant, contemplative, half-contemptuous look is not that of a man worn out by chronic disease. In the first place there are not many chronic troubles which last ten years; and when they do, they make their marks as they go along. The patient is slowly broken down; piece by piece, his strength, his courage, and those properties which go to make up what we call "self" are slowly sapped. This man's face does not present such a story; it is rather the face of a man who has been accustomed to see his case baffle his doctors, without experiencing the depressing influences of an organic trouble. Then again, he tells a different story from that which a chronic case would relate. Let us hear it. At the outset, nine years ago, he began to experience paroxysmal attacks of pain in the upper zone of his abdomen. These pains grew worse through the attacks until they were somewhat relieved by spells of vomiting. Later the pain became more or less constant, with these occasional exacerbations. The matters vomited were very offensive, liquid, blackish in color, but as far as I can determine not known by microscopic examination to be blood or bile. The pain he says, ran across his body from the left just below the edge of his ribs and was of such a sharply-defined nature as to make him suspect that some animal was darting to and fro. His skin at the same time, seemed to be hyperæsthetic with this, occasionally, he had periods when he suffered from retention of urine; from the account it would appear that the catheter did not carry off the water until the bladder-walls were stimulated to action by outside irritation such as punching or kneading.

He went into a hospital after being under treatment for two years outside without relief. Here to quiet his intense paryoxysmal pain, he was given morphia; this practice was kept up for eighteen months until he was in the habit of taking five grains hypodermically in the twenty-four hours. Since dismissal, he again experiences the pain though less intensely, and has reduced his morphia taking. As he lies here to-day he tells us, he is here to do or die, that he is willing to undergo any operation or course of treatment however rigorous if he is only relieved. As we approach this case, let us first endeavor to analyze the course of his trouble. We seem to have three stages: first, the developing disease, second a morphia-eater; and third, a decrease of morphia taking with a recurrence of the original pain, for he confesses to the occasional use of that drug, which after careful examination we find is taken pretty regularly during the day.

It has always been my experience that when morphia has been given for any length of time for the relief of pain that there occurs a mimicry of the disease on the gradual withdrawal of that drug; a simulation of the original aches and pains which imitate the real complaint so cunningly that it is often difficult or impossible to decide their true source. We will remember this element when we reach the history of the trouble again. The fact complicates an originally obscure case.

It was not nephritic colic; here the pain is anterior in the renal region along the course of the urethra, and the passage of a calculus is common. Vomiting is common but the case is clearly not of this sort. Neither is it hepatic; true it is abdominal, but there never has been jaundice or gall-stones found after careful search. This reduces it to gastralgia or enteralgia. The position of the pain, and the other signs all point to the stomach as the original seat of trouble. This was true pro-

bably nine years ago, but what of the condition to-day. It will be necessary to eliminate the morphia element before we can study the case successfully or intelligently. Without demonstrable organic lesion, it is never safe to attempt to diagnose any case into which such a factor enters. Then we will study what is left; now symptoms will probably then rise up which will furnish good data.

In conquering the morphia-habit it is necessary for the physician and patient to work hand in hand; there must be forbearance and patience and sympathising encouragement on the one side and conscientious, earnest effort on the other. In such a condition of things, it will be possible to overcome this dread trouble, but it can be done in no other way. Simultaneously with this will be established a tonic nutrient treatment, a regular diet and good moral control. Electricity may be used to tone up the system, some analgesic which is not an anodyne will be given, as antipyrin. We will not attempt any lavage or nephrectomy however, until we clear up the case sufficiently to make a diagnosis reasonably certain and not mere guesswork.

Selected Articles.

THE COMMON DISEASES OF THE BREAST.

BY CHRISTOPHER HEATH, F.R.C.S.

To-day I will speak of the common diseases of the breast. Some of them you may see here in the wards of the hospital, and others you will have opportunities of seeing, I have no doubt, in the out-patient departments, and you may also meet with them in private practice. First, let me say a word with regard to atrophy of the breast. You will, of course, find different individuals with their breasts differently developed; for in some families there is hardly any development of the mammary region, while in others you find that all the girls are full-breasted. The practical surgical point is whether or not the breast is sufficiently developed, particularly the nipple, for the duties of maternity. That is where the atrophy of the breast, if we may so call it, becomes important in practice. If you are retained to attend a woman in her first confinement, it is quite worth while to take a little trouble before she is confined to see that she is able to nurse the child which will be born. Many women have very sessile nipples; and you must remember that the nipple is not merely a series of ducts for the passage of the milk, but that there is a large quantity of involuntary muscular fibre in it, and it is because of that involuntary muscular fibre that the nipple, when it is excited, becomes more prominent, thus enabling the child's mouth to retain it. You may notice that when a child is first put to the breast it will not be able to grasp the nipple, but, by poking its nose and mouth against it, it excites the nipple, so that it becomes more prominent, and then the child can hold it.

It is quite worth while to draw out the nipple, if it is too sessile for the child to get at it, by an ordinary breast-pump. The old-fashioned breast-pump, I snppose, has quite gone out of use. The more modern instrument is one with which a woman can draw the breast herself, and may be seen in all the chemists' shops. It consists of a little glass shield, with a mouth-piece coming off from it, at which the woman can suck, so making a vacuum; and the milk then comes away and collects in the lower part. But a little friction also may do good in developing the nipple—a little gentle rubbing, too, will harden the skin, and that is an important matter. But let me say that if friction is carried to an abnormal extent, it may produce hypertrophy of the breast, which is a serious thing, leading to amputation.

You will find that the monthly nurse, if she is a good one, will take a little trouble to bathe the nipple of a primipara with a little brandy and water, which is a common recipe and a very good one; but one great reason why nipples become sore is that they are so constantly wet. You may not be aware that many women suffer from an involuntary flow of milk from the breast, so that their clothes are apt to get wet, and I have here a little contrivance to be used in cases of that kind. It is a little glass into which the nipple can be slipped, and it can be worn under the dress. The milk which is superfluous accumulates in the lower part of the glass, and does not wet the breast. It is a great point that the nipple should be dry, and that it should be protected when it is not being used; otherwise it is apt to become what is called "chapped," Now a chapped nipple is the beginning of a series of troubles, and it should therefore be cured as soon as possible. I have asked in the midwifery department of the hospital what is now the favorite remedy for chapped and sore nipples, and I am told that it is glycerine of tannin and sulphurous acid, of each a half ounce with one ounce of water. You have here the astringent effect of tannin and sulphuric acid and I have no doubt that it is a good remedy. There are fifty remedies for chapped and sore nipples; and perhaps one of the best surgical ones is nitrate of silver, if properly applied. The great mistake made in the application of nitrate of silver for a sore breast is taking a stick and rubbing it on promiscuously; you ther

have a great patch of caustic, and you may have a large sore on the nipple. The proper way is to take a fine camel-hair brush and wet it with a ten-grain solution, or draw the brush over the stick of nitrate of silver, and having thoroughly dried the nipple, to paint into any little crack that you can see. Some sore nipples evidently depend upon the condition of the child's mouth. A child with an aphthous mouth is apt to produce a sore condition of the nipple. It is difficult to treat, and no doubt it may be communicated from one child to another; for if a healthy child is put to a nipple of that kind, it may possibly get thrush. Borax is the great remedy for the complaint—the old-fashioned borax and honey, or the more modern glycerinum boracis, applied freely to the child's mouth, and also to the nipple of the mother.

These are comparatively simple cases; the com plicated and important one is when syphilis is present in the child's mouth. When you get into practice you cannot be too much on your guard about syphilis; that is to say, you must keep your eyes open but your mouth shut. If you bear it in mind, you will avoid the errors into which practitioners are sometimes led, both as regards the mother and as regards the wet-nurse which is an important point. A woman, we will say, has borne a healthy child, and she is unable to nurse it. A wet nurse is engaged and you find some time afterwards that the child develops a coppery rash upon the body, with all the symptoms of constitutional syphilis, and it becomes clear that the child has been syphilized by the nurse. Such cases have occurred from time to time, and they are extremely serious. It is very important that in selecting a wet-nurse you should go thoroughly into the history of her previous life, and inquire whether she has suffered in any way from sores about the genitals, or whether she has had second ary, or, possibly tertiary symptoms. Generally the wet-nurse is young, and will not be likely to have got so far as tertiary symptoms; but it is not uncommon for a young woman to have unconsciously secondary syphilis from a husband, or in other ways, because wet-nurses are not always married. You find perhaps that there is some evidence of syphilis in the throat, and she may communicate this to the child she suckles by kissing it. I do not think there is any proof that syphilis can be communicated through the milk, but what more often happens is that the woman's nipple becomes a little sore, then you get the child's mouth infected, and all the symptoms of constitutional syphilis develop, and it has sometimes happened in such cases that the syphilized child has been put to the nipple of a healthy woman, and has again communicated syphilis. You cannot be too particular in the choice of a wet-nurse, and you should be most particular in looking at the child that you give to the wet nurse. If you have delivered a woman who is unable to nurse her child, and who is the subject of syphilis, the child will undoubtedly within a month or six weeks after birth develop congenital syphilis; and if you have already put the child to a wet-nurse, the chances are that it will communicate syphilis to her, and then trouble may arise—an action may be brought, or remuneration would have to be made. I draw your attention to these things because mistakes are sometimes made simply through inattention to them.

Now, supposing a patient has a simple ordinary sore nipple, what bad results may result from it? The first thing is that the unfortunate woman with a sore nipple is almost unable to nurse her child. The nipple is so exquisitely tender that when the child is put to it, the woman, whether the mother or not, cannot bear the pain. Under those circumstances, of course you have to do something, and the best thing you can do is to provide an artificial nipple. A glass shield like that which I hold in my hand is the usual thing. Upon it there should be fitted an ordinary india-rubber teat, and if that is placed over the nipple and the nipple is made to go well into it, with a little suction by the child's mouth the milk flows, and there is no irritation of the nipple. You can then proceed with the medication of the nipple, without doing harm to the child. But it often happens that the woman neglects herself. She has got a sore nipple, she cannot nurse the child, and she allows her breast to become gorged with milk, which is the first stage of inflammation of the breast. You will sometimes have a woman come to you with a breast as full of milk as the unfortunate overstocked cows that are sometimes driven to the fair, not having been milked for twenty-four hours before selling, in order to show the purchaser that they have good udders of milk. The woman suffers in the same way as the lower animal; the distension of the breast is extreme, and there is great weight and distress, and if it is not shortly relieved, it soon ends in inflammation. The mode of relieving it is a simple matter. The milk may either be drawn with a pump, or the breast may be relieved very much by gentle pressure of the hands, the operator standing behind the patient and compressing the breast, so that the milk is squeezed out without difficulty. I say gentle pressure, because if you use anything like violent pressure, you may do a great deal of harm. In the case of new-born children, one sometimes sees a foolish old monthly nurse, who observes a little fluid coming away from the breast of a child (which is not at all uncommon), set to work vigorously to squeeze it out, and every now and then you get in such cases an abscess in the breast of a new-born child. If, as I have said, the woman's breast is gently squeezed, the milk exudes, and the trouble may pass off. If it is necessary

stop the milk in the breast—if, for instance, the child has died, or has been taken away from the mother, and the breast simply becomes overloaded, then there is nothing so good as the application of belladonna. At the present time in this hospital, and, I think, a good deal through my efforts and teaching, we use belladonna for most local inflammatory ailments; but originally the use of belladonna was introduced for breasts in which we wanted to arrest the secretion of milk. There is no doubt that the application of belladonna mixed with glycerine is the very best remedy that you can have for that kind of case. Well and thoroughly applied over the breast, it tends to arrest the secretion of milk, relieves pain, and prevents the occurrence of inflammation. Then suppose we have the breast not properly emptied, it having gone beyond that stage before you see it, you certainly will have inflammation set up in the breast—general mastitis, if you like to use the word. There are two theories with regard to that inflammation. I believe myself that in the great majority of cases it begins, as I have described, in distension of the milk ducts; but some authorities believe that the inflammation travels up the ducts from the sore nipple, and they say that the nipple is the direct cause of the inflammation. Be that as it may, you find all the symptoms of inflammation, namely, swelling, heat, and redness, and the great thing, of course, it to relieve it as soon as possible.

If there is one thing that a woman who has a sore breast objects to more than another, it is to having it, as she calls it, "lanced." If you say to a patient that you are going to lance her abscess, she will probably button up her dress and disappear, and you will not see her again. When I used to see the out-patients I generally got over the difficulty in cases of this sort by avoiding the word 'lancing," and by making no open show of knives and basins. If you open your lancet behind your back or in your pocket, and then just make a puncture, which is really all that is required, you can let out the abscess without any great difficulty, and your patient will be only too grateful for what you have done. Of course, if you are going to open an extensive abscess, it is wiser to give the patient chloroform; but if you have not the opportunity of giving chloroform, you must act artfully and open the abscess quite deciently without giving the patient any pain; e puncture is so momentary, and the relief of ision of the abscess is so great that the operan is really painless.

With regard to the opening of an abscess of the ast, in what direction should you open it? No bt the best plan is to open in the direction of ducts as far as possible. Of course, you know from the nipple in the middle there are ..t ducts, as they are called, radiating, and then the lobuli of the breast are arranged all round, so that in making the incision anywhere near the nipple you should always make it in a line radiating from the nipple, and you should make it, as far as possible, in a dependent position. Of course, if the abscess happens to be in the upper part of the breast, an incision should be made immediately above the nipple, which is as good a position as you can have; but if the abscess is in the lower part of the breast, clearly you must make it lower down. You must make a dependent opening wherever it is, and you must remember the anatomy of the gland so as not to cut the essential parts of the breast across more than you can help. In the wards, from time to time, we see cases of abscesses of the breast, and they are invariably the neglected ones, for we do not ordinarily take in cases of common abscess of the breast. Mr. Holden has given me the notes of three cases which we have had in the wards this year. I will not trouble you with the details of two of them, which are very common cases, but will pass on to that of a woman named E. B., which I will give a little in detail.

She was aged 21, and was admitted on June 27. She was confined with her first child (these abscesses generally occur with the first child) on May 30, 1888. She tried to suckle the child for two days, but had not enough milk. On June 15 she had great pain in the right breast, and during the night the breast swelled to a great size. On June 16 the breast was poulticed till the pain ceased. The left breast swelled in a similar way, and it was poulticed. On June 17 the right breast began to discharge about the lower border, and very soon a number of discharging points formed, and a large amount of pus flowed during the following week. Within a few days the left breast began to discharge, but it was never so bad as the right one. On June 26 the right breast ulcerated right through above the nipple. The lower part of the breast being thus detached fell downwards by its own weight, disclosing a large abscess-cavity between the breast and the pectoral muscle.

On admission the right breast was pretty well converted into a large abscess. At the top, two inches above the nipple, many discharging points joined together, forming a large, irregular, ragged wound of a linear character, chiefly transverse. The result was the falling of the breast in a flap downward, exposing the whole cavity of the abscess. Those who saw the case can hardly forget it; the condition was so remarkable on account of the enormous destruction of tissue, and the large abscess, which was very widely open. The abscess was submammary, the floor being formed by the pectoralis major, the falling flap containing the whole thickness of the breast, and, except for a questionable portion below, its whole substance.

This is an exaggerated example of the bad

effects of over-poulticing. I do not know whether the woman had medical advice or not, but she seems to have been advised to poultice, and that is just what is done domestically; they go on poulticing until they reduce the vitality of the part, and the whole of the tissues have become undermined by suppuration, and then at last the patient has to come into the hospital. Let me remind you of what was done before I show you the patient. The great point at first was to support the breast, and you may remember I insisted upon it being properly supported by plaster. It is of no use bandaging in these cases, but with long strips of plaster properly applied you can make the pressure sufficient to bring the parts into position.

You now see from the appearance of the patient before you that the description Mr. Holden has given is perfectly correct. There is a great transverse cut running across the breast, and the whole breast fell down. On the other side you see there are scars of a less severe suppuration, a part of the breast was a good deal undermined, but it was nothing compared with the right side.

As regards the treatment of these mammary abscesses, in the first place let me say that I do not decry poultices. You must have heard me say in the wards that I have not lost my faith in the old-fashioned linseed poultice, and I believe it to be an extremely comfortable thing if properly applied and if the breast is properly supported. The great mistake is keeping it on too long. A bad breast should be held up either with a silk handkerchief or a bandage. If it is kept up and well supported, I have no objection to poulticing for a few hours, but as soon as there is any matter present it ought to be let out. That is the difficulty—that the matter is not always at the surface—and the surgeon hesitates because his finger is not sufficiently educated to be sure whether there is any matter or not, and he allows it to burrow; whereas if he were more up to his work he would have made a timely incision, and saved all the trouble. For myself I would much rather make an incision uselessly in a case of that kind before the matter is formed than I would allow the matter to burrow, even twelve hours after it was formed. You do no harm by an early incision, for if nothing escapes you withdraw the knife, and the puncture soon heals; but if you find the matter deeper than you expect, and it wells up beside the bistoury, you have only to enlarge the opening, and the matter flows out.

If the case comes before you after the matter has burrowed, a great deal can be done by the modern system of putting in drainage-tubes, which in these cases are extremely useful. You put in a properly arranged drainage-tube, so that the opening shall be dependent, and the matter finds its way out, and you relieve the patient materially. Here, again, let me warn you against putting in too many drainage-tubes and keeping them in too long. There is sometimes a tendency, when a drainage-tube is put in, to leave it in indefinitely, whereas it does all the good it is likely to do in two or three days. You will notice how soon we remove drainage-tubes here in cases of amputation and the like. It is of no use to leave them in a long time; in fact, they become practically setons.

Then let me give you another caution. Be careful that you do not lose your drainage-tube. I have more than once seen cases in which a breast has been drained, I have no doubt very properly, but unfortunately the surgeon has lost a piece of the drainage-tube. Months afterwards the patient in such a case comes back, and there is a great hubbub because the piece of drainage-tube has come out of a sinus, and naturally the patient appreciates the fact that the trouble has been kept up by the tube. You should, therefore, have strings to your drainage-tube, or you may adopt the plan you have seen me use of putting a safety-pin through the end of it, which, I think is better, because it always keeps the end of the tube flush with the skin.

So much for the ordinary form of abscess. Let me remind you that you may have mammary abscesses in different situations. There are three common situations in which an abscess may form. First, you may have it in these straight tubes round the nipple. One of these little tubes is blocked by epithelium; the tube then becomes distended with milk. If you see it, you may open it, and call it a little lacteal tumor if you like; but if it is not seen and treated, it is apt to suppurate, and then you get a little elongated abscess close to the nipple. The treatment is quite obvious and simple, and you merely incise it. A more serious case is the one I have described—an abscess in the substance of the breast. Then, lastly, there is the form which you meet with occasionally, but not commonly—an abscess under the breast. In the case the notes of which I have read to you, by the time the patient was admitted the abscess had got under the breast, but I do not think it was so originally. But there are cases in which the cellular tissue between the breast and the pectoral muscle becomes inflamed and the abscess forms there, and you have the remarkable feature of the breast being thrust forward by a swelling behind it; and the fluctuation, instead of being through the breast is at the margin of it, and usually the lower margin. In these cases, of course, you would make a free incision below the breast and let the matter out. It runs out readily, and afterwards, by judicious pressure, you bring the breast back again into its original position, and it soon gets a firm attachment. Those are comparatively simple cases if they are recognized, but I have known an abscess of that kind to be taken for a much mor

serious disease. The patient was thought to have a rapidly-growing tumor of the breast, which, after a time, resolved itself into a small abscess over the pectoral muscle.

Let me say a word with regard to a simple matter, but one which is sometimes misunderstood, from the want of having seen it. There is a disease of the skin which we know as molluscum contagiosum, which is found upon children's faces, and which you may sometimes find upon a woman's breast. It is a little collection of sebaceous material, and if examined microscopically will be found to consist of cells packed together in lobular masses, bounded and separated by fibrous tissue. Some authorities do not agree as to its being contagious, but I have no doubt it is contagious in this sense, that if a child happens to have it on its face—a common situation—you will find that the mother's breast will become inoculated, and there will be a development of molluscum contagiosum upon it. I have here a picture of it. You see the sebaceous material collected in the follicles of the child's face, and there is exactly a similar disease produced upon the mother's breast. I am not sure that it can be communicated from the mother to the child, but I am sure that it can be communicated from the child to the mother. It is not a serious thing, but you ought to be able to recognize it. The treatment is to squeeze out the little sebaceous collections, which heal up readily enough, as the ordinary comedones do on the face. Then there is another thing which is occasionally found on the skin of the breast—that is keloid. It is not common, and I mention it for that reason. You may meet with a patient who has developed keloid on the skin of the breast, which is very apt to be mistaken for a more serious disease. At first it is hard, and looks a little like scirrhus. I simply mention it that you may have your attention called to it.—*Br. Med. Jour.*

THE TREATMENT OF NEURALGIA.

PROPHYLACTIC TREATMENT.

Idiopathic neuralgia, like the other neuroses' is a hereditary disease. The ascendants of the neuralgic subject—one or more of them—were either neuralgic, or were sufferers from hysteria, ilepsy, or some other neurosis; or, the parent ay have impaired a naturally good constitution intemperance or some other vice, and so entailed the offspring that instability of nerve organiza-n, which under suitable provocation, finds ex-ssion in some form of neuralgia.

There are, of course, exceptions to the rule that ralgia is a hereditary disease; children born lthy have had their constitutions undermined insufficient diet, by some one or more of the diseases peculiar to children (as scarlet fever or diphtheria,) or even by precocious addiction to some vice, etc.

Children who have inherited the neuralgic temperament should not be allowed too study too hard at school, and should not be subjected to physical tasks of an arduous and exhausting nature. Moderation in all things should be the rule. Such subjects are unfitted to bear a strain. At the same time they should be required to walk in the open air, to indulge in invigorating sports, to perform gymnastic exercises of certain kinds which can be borne without too much fatigue, to practise rowing, horse-back riding, swimming. The cold bath or cold douche in the morning is a good auxiliary. All these hygienic measures improve the circulation and develop a strong muscular and nervous organization. Hydrotherapy especially toughens the integument and prevents the frequent occurrence of debilitating rheums.

To these means should be added a full, generous diet of meat, eggs, fish, milk, cereals, vegetables and fruits. Very many cases of neuralgia have been traced to a meagre and insufficient dietary. When we remember that neuralgia is essentially a disease of malnutrition, and that nerve substance is a conglomerate of richest animalized principles (phosphorized oleo-albumen), we see that we must place in the foremost rank of remedial agencies those means which improve or restore the nutritive functions.

Some of the worst forms of migraine, prosopalgia, etc., that I have ever seen were among the poor and ill-fed. For delicate half-starved children brought up in slums and tenement houses there can be but little hope; out of these breeding-places of disease come multitudes of the hysterical, the neuralgic, the nervously shattered, who float about between the hospital and the almshouse.

The neuropathic child should be taught the necessity of plenty of sleep. Too much emphasis cannot be placed on this requirement. Eight, even ten hours sleep a day is not too much. Those predisposed to neuralgia should be compelled to go to bed early—between the hours of nine and ten every night, and all evening excitements should be forbidden. Among the latter should be mentioned the reading of dime novels

Aseverything that favors the precocious development of the passions is bad, the evil influence of corrupt companions is to be depreciated and avoided by every possible means. It is, however, a matter of great difficulty for the parent or guardian always to avert such influences, for the cousin or class-mate of the moral and "goody," sort is often the one who in secret instils the poison and corrupts the nature of the child.

Doubtless the evils of masturbation, as practised by children, have not been too highly painted. The neuropathic child cannot be too early, too earnestly

or too faithfully warned against the pernicious effects of this vice.

PROPHYLAXIS IN THE ADULT.

The adult, who, by faulty organization, by debilitating influences, by previous attacks of neuralgia, is predisposed to this neurosis, demands essentially the prophylactic hygiene as has been above outlined. He should possess some light, healthy employment, and avoid occupations that involve arduous toil and great anxiety. Good, nutritious food at regular seasons should be eaten, and alcoholic and other stimulants eschewed; the neuralgic should also religiously refrain from smoking. These patients are prone to seek excitement, and often suffer a breakdown in consequence. One patient with whom I was acquainted, used invariably to experience a return of her megrim after going to an evening party or a ball. Such persons are uncommonly vivacious under excitement, and endure well the strain for the time being. They are, however, capable of using up in one evening's dissipation all their reserve force, and bringing their nerve-centres into a state of unnatural erethism that weeks of rest may not calm.

The condition of these sufferers is often deplorable. Of fine literary and æsthetic tastes, they cannot long enjoy reading, artistic pursuits, etc., without paying the penalty in an attack of severe orbital or supra-orbital neuralgia. One of my acquaintances cannot read an hour consecutively without twinges of pain through his temples, which oblige him to desist. He regards himself as shut out from the best enjoyments of life; is gloomy and suicidal. Persons of this temperament need an especially fortifying regimen; of which life on the sea (yachting), in the woods, among the mountains, with absolute freedom from brain work, shall form the principal part.

Some writers (as Vanlier and Anstie), have found excessive religiousness a factor in the genesis of neuralgia; but doubtless an ardent espousal of the most gloomy theological beliefs is less harmful than the indulgence of depressing vices, or the cultivation of voluptuous appetites.

The same remarks that have been made about sleep, are applicable to the adult neurotic, who should have regular habits of sleep, and whose sleep should be long and sound. If he happens to be a poor sleeper, he should endeavor to woo tired nature's sweet restorer, by taking much exercise in the open air, and especially diverting exercises, by cold bathing in the morning, and the warm bath just before going to bed, with vigorous shampooing of the body, along with the sipping of a cup of hot water containing some mild cordial, as spirits of lavender, or even a little Cibil's Fluid Beef; this is far better than resorting to any of the ordinary hypnotics, as chloral and sulphonal, which are sure, in the end, to leave the nervous tonus damaged. It is only exceptionally that I would allow a neuropathic patient to apply to any of the so-called hypnotics for relief. Where a small dose of whiskey, or a glass of bitter ale will produce refreshing sleep, this is safer than chloral or a narcotic. Sometimes it makes a great difference what the victim of insomnia eats for her supper, and there are all sorts of idiosyncrasies in regard to this. Some persons will sleep better with a full, some with an empty stomach. To some patients your best prescription is a supper of hominy and milk; to others, a light lunch, or cup of beef tea on going to bed.

Above all things, the neuralgic invalid should have a mind at ease, for anxiety, care, worry, overmastering passions, are the greatest foes to healthful sleep.

As adjuvants to a cure, there are certain tonic medicines which deserve mention here: quinine, strychnine, iron, arsenic, and a very moderate amount of some of the fermented liquors, wine and beer. to the anæmic, iron and arsenic are especially useful; a good combination is the *iron, arsenic and strychnine pill*, furnished by a number of our pharmacists.

Fothergill's pill is a good stomachic tonic. Its formula is as follows:

℞.—Acid. arseniosi	gr. j.
Ferri. sulph. exsic.	ʒ ss.
Pulv. capsici	ʒ j.
Pil. aloes et myrrh	q. s.

M.—Ft. pil. No. LX.

Sig.—One pill three times a day.

Or five minims of Fowler's solution may be associated with ten grains of bicarbonate of sodium and five of potassio-tartrate of iron in a fluid ounce of infusion quassia, this dose to be given after each meal.

Arsenic is one of the best anti-neuralgic remedies that we possess. According to Anstie, it is especially useful in the visceral neuralgias. With arsenic, cod-liver oil may often be conjoined to advantage. More satisfactory results will be obtained from the pure oil, when it can be borne, than from any of the emulsions, all of which, according to my experience, patients soon tire. Too much care cannot be taken that the oil shall be perfectly sweet and fresh.

A course of electric treatment (galvanism preferably to faradism), sometimes works well; both by calming the erethism of the nerve centres, and promoting the nutrition of the latter. The electrical treatment of neuralgia will claim especial consideration in another article.

Treatment of Diatheses which lead to Neuralgia—Neuralgia is sometimes under the dominance of a diathesis such as gout, chlorosis, rheumatism, hysteria, diabetes. The treatment which is devoted to the diathesis is the proper treatment of the neuralgia.

Neuralgia of Toxic Origin.—Neuralgia may be dependent on a poison in the blood; lead, mercury, arsenic, alcohol, malaria. Here the leading indications are: 1, to suppress, then antidote, then promote elimination of the poison; 2, as far as possible to protect the organism from the effects of the toxic agent, and palliate symptoms as they may arise. It is evident that when the proper antidote can be administered,, this is the remedy *par excellence* for the neuralgia. In malarial neuralgia, for instance, quinine in large doses is indicated. In alcoholic neuralgia suppression of all alcoholic stimulants should be strictly enjoined. In nicotinic neuralgia tobacco should be abstained from. In colica pictonum, the proper treatment of lead poisoning will also cure the neuralgia.

Reflex Neuralgias.—These neuralgias are due to a localized morbid state (of the uterus, kidneys, etc.), and the successful treatment of the suffering organ will cure the neuralgia.

Surgical means of cure.—Neutronomy, neurectomy and nerve stretching have all been practised for the cure of intractable neuralgia. Nerve stretching will be considered with sciatica, and neurectomy, (which has given some brilliant results) under the head of prosopalgia.

Treatment of Neuralgic Paroxysms.—When in the presence of an attack of neuralgia, the first thing, of course, to do is to relieve the pain. It is desirable, if possible, to obtain analgesia without resorting to morphine. In many of the neuralgias, such as migraine and those of central origin, whether idiopathic or symptomatic, antipyrin often gives speedy, marked relief, fifteen grains being followed by complete disappearance of the pain. A repetition of the same dose in six hours, and a continuance of this treatment for several days, the antipyrin being given often enough to keep the pain under subjection, may be all that is required, the patient being as far as possible removed from the reach of causal influences. This is Germain Sée's treatment of the headaches of students, headaches which often oblige matriculates to suspend study for weeks or months. Acetanilid in half the dose of antipyrin may be attended with an equally good result, and the same may be said of phenacetine. Lately exalgine has come into favor in some quarters; it has been praised as an anti-neuralgic by Dujardin-Beaumetz and Bardet.

It is probable that where antipyrin fails none of the other medicines will succeed.

In my own practice I have seen good results from acetanilid in neuralgic headaches. In cervico-brachial, dorso-lumbar and sciatic neuralgia I have seen no benefit from any of these members of the "aromatic series" Citrate of caffeine and guarana are remedies from which much good may be expected in hemicrania, and always where the pain seems to be the consequence of nerve tire. The dose of caffeine is three or four grains, of guarana twenty grains.

The following prescription for which I am indebted to the late Dr. George M. Beard has given good results in headaches of almost all kinds:

℞.—Cit caffein.

Carb. ammon. . . . . āā ℈j.

Elixir. guaranæ . . . . . f℥j.

M.—Dose, a teaspoonful every hour till the pain is relieved.

Some of my patients, delicate migrainous patients, keep a bottle of citrate of caffeine constantly on their toilet tables; a frequent resort to it keeps them free from headaches. I have never seen any harm result from the continuous use of this drug.

Aconitine in pills of $\frac{1}{100}$ grain, one pill every five hours till the supervention of the physiological effects, or till the pain disappears, sometimes has a charming effect in migraine and tic douloureux.

In face ache, especially when due to a decayed tooth, the tincture of gelsemium in five-drop doses every two hours is often followed by speedy subsidence of the pain. I have always found gelsemium in this dose to be a perfectly safe remedy.

Some practitioners have great faith in a full dose of quinine (fifteen grains) in neuralgias of the peripheral nerves, whether due to malaria or some other cause. I cannot say that I have ever found this alkaloid beneficial in neuralgic paroxysms, except where the attack was clearly of malarial origin. "Gross'" neuralgic pills, in which quinine is combined with aconite, strychnine and morphine are, I think, chiefly of use as a prophylactic where attacks have been frequent.

As outward applications chloroform liniment, veratrine ointment, extract of belladonna rubbed up to a paste with water, spread on cloth and applied over the seat of pain, have had their advocates. No external means can be relied on. Anodyne embrocations are more useful when the pain is rheumatic than when it is neuralgic.

Hypnotizers claim to have accomplished wonderful results by putting the neuralgic sufferer into the hypnotic sleep, and assuring him that the pain no longer exists. As nothing is impossible *a priori*, and all things are to be believed on sufficient testimony, we have now adequate warrant for a certain faith in hypnotism as a means of cure. Bernheim's Book on "Suggestion as a Therapeutic Agency" contains a number of instances of severe neuralgic and neuralgiform pains cured by hypnotic suggestions.

It will often happen that none of the above means are applicable to the case in hand, or, if tried, they have resulted in failure. There is nothing to do then, but to resort to a hypodermic injection of morphine. The tablet triturates of

the pharmacists are very handy for this purpose. The commencing dose should be the sixth of a grain. If no relief is obtained, the injection may be repeated in fifteen minutes or half an hour. In bad cases of tic douloureux migraine visceralgia, I have often had to repeat these injections every half hour until a grain, a grain and a half, and even two grains have been administered. Some pain creates great tolerance of morphine. I have seen a delicate neurotic girl in a paroxysm of cervico-bronchial neuralgia bear with impunity a quantity of morphine introduced subcutaneously that would have killed a strong, well man. There is not the same tolerance of atropine, and it will not do to push the injections of this alkaloid. If for the first injection one of the morphine and atropine tablets be used, in the subsequent injections the atropine should be omitted. The dryness of the mouth and throat that follows a full dose of atropine gives the patient great annoyance and discomfort.

For ordinary hypodermic use I employ a solution of morphine, consisting of four grains of sulphate of morphine to a fluid ounce of cherry laurel water. Of this, a hypodermic syringeful may be injected with safety in an adult. The cherry laurel water keeps the solution from spoiling.

Inject into a fleshy part of the arm; there is no advantage in injecting over the seat of the pain.

Deep injections of chloroform sometimes as effectually relieve the pain as morphine injections. For sciatica take up a syringeful of pure chloroform and inject it the depth of the syringe-needle into the gluteal muscles.

Antipyrin may also be used hypodermically. Dissolve eight grains in a hypodermic syringeful of warm water and inject the whole into a fleshy part of the arm or thigh. Germain Seé highly commends this use of antipyrin.—Dr. E. P. Hurd, in *Times and Register.*

MEDICAL NOTES.

In a case of *traumatic priapism*, Prof. Brinton ordered rest in bed and twenty grains of bromide of potash four times a day.

In cases of *coccygodynia*, hypodermic injections of warm water will give relief.—Prof. Parvin.

As a vaginal wash in *vaginitis*—

℞—Creolin, ... ʒ j.
Aquæ, ... f ʒ xvj.
—Prof. Parvin.

Prof. Brinton is very specific in directing that a *fracture of the radius and ulna* be dressed with the hand midway between supination and pronation, and without a primary roller.

For a man of forty-six, with *bronchial neuralgia*—

℞—Atropinæ sulph., ... gr. $\frac{1}{60}$.
Morphinæ sulph., ... gr. $\frac{1}{4}$. —M.

Sig.—Hypodermatically once a day.

Also small blisters over points of redness.—Prof. DaCosta.

In cases of *sterility* in women, resulting from excessive acid secretion, Prof. Parvin recommends—

℞—Sodii bicarb., ... gr. xij.
Glycerini, ... ʒ j.
Aquæ destillat., ... f ʒ iv.—M.

Sig.—Use as vaginal injection just before copulation.

For a woman of forty, with *aortic constriction* and moderate *hypertrophy of heart*—

℞—Barii chlorid., ... gr. $\frac{1}{10}$.
Aquæ destillat., ... f ʒ j.—M.

Sig.—Three times a day.

Also Tinct. belladonnæ, gtt. v. every night.—Prof. DaCosta.

Prof. Brinton brought before the class a man of about thirty years of age, with a very tight *stricture of the urethra.* He passed through the stricture a filiform bougie, allowing this to remain four days, to produce absorption, then threading over the filiform bougie a silver catheter and passing it into the bladder; then rapid dilatation by dilator and bougies.

For a woman of twenty, with *aortic regurgitation* and *hypertrophy of heart*—

℞—Tinct, aconiti, ... gtt. ij.
Tinct. belladonnæ, . . . gtt. iij.
Aquæ, ... f ʒ j.—M.

Sig.—Morning and evening.—Prof. DaCosta.

Prof. DaCosta brought before the clinic a woman with *goitre*, and prescribed—

℞—Iodinii, ... gr. xxx.
Lanolin, ... ʒ j.
Ol. juniperi, ... gtt. v.—M.
Fiant unguentum.

Sig.—Apply over the goitre. Also three drops of Churchill's tincture of iodine, well diluted, to be taken three times a day, and to be increased to ten drops three times a day.

A man twenty-seven years old, suffering with *chronic gastritis*, was brought before the class by Prof. DaCosta, and treated as follows:—Diet o meat; milk, with ten drops of aromatic spirits c ammonia in each glassful; no starchy food; also—

℞—Thymol, ... gr. $\frac{1}{4}$–$\frac{1}{2}$.
Tinct. gentianæ comp., . . ♏ xl.
Elixir aurantii, ... ♏ xx.—M.

Sig.—Two hours after each meal.

Prof. Brinton treated a case of *internal hæmorrhoids* by pulling them down, after stretching t

anus with the thumbs, making incision around base of each pile to divide the nerves, then passing a needle armed with a double ligature through the base of the pile and ligaturing each half tightly in the incision made to divide the nerves. One end of the ligature was left hanging out, so that the piles could be readily brought in sight should secondary bleeding occur.

As a general rule applicable to cases of *retention of urine*, where retention has existed over twenty hours, do not withdraw the whole contents at once; withdraw one-half at once, and return in half an hour or an hour and evacuate the balance. Sudden withdrawal may give rise to one of three conditions, viz., cystitis, paralysis, or hæmorrhage from the organ.—Prof. Gross.

For *incomplete abortion*, Prof. Parvin recommends the following treatment: Dilate the cervix by means of Hegar's hard rubber dilators; extract the remains of the uterine contents by Emmet's curette forceps, cleansing them each time of removal by dipping in a carbolic acid solution (weak). After all material is removed, swab out the entire inner uterine surface with tinct. iodine (Churchill's), by means of cotton wrapped over an applicator.—*Coll. and Clin. Rec.*

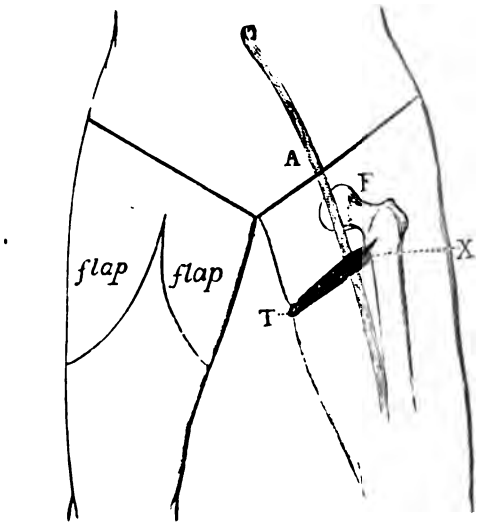
AMPUTATION AT THE HIP-JOINT.

I have recently been practising on the dead body a new operation for amputation at the hip-joint, though I have not yet had an opportunity of trying it on the living.

The dangers of this operation are three—shock, hæmorrhage, and infection of the wound from its proximity to the anus. The first-named will exist probably in spite of every improvement; the two latter I think are obviated by this new method of operating, which I will now briefly describe.

The femoral artery is carefully felt for below Poupart's ligament; one inch below Poupart's ligament and half an inch outside the artery a stout nickel or steel skewer is thrust straight through from before backwards, and emerges on the posterior aspect a little above the gluteal fold This skewer passes just inside the neck of the bone in the angle between neck and shaft of femur. A piece of India-rubber like that used in boy's cata- t is passed on the inside of the thigh, and t sted in a figure of 8 over the projecting ends of t skewer. It can be tied or, preferably, clamped n a bit of soft metal. By this means the oral artery is completely controlled above the gin of the profunda. A long straight trans- on knife is now passed in the same direction as skewer, but entering the skin at a slightly er level, and emerging at a slightly lower level A straight vertical incision, about two inches long, is now made with the knife, which is finally carried inwards, making a tapering flap from the tissues on the inner side of the limb.

During this part of the operation very little hæmorrhage is likely to occur, as the femoral in front and the sciatic artery behind are compressed by the elastic band. The limb is now forcibly abducted, and the capsule, stretched over the protruding head comes into view, a nick with the knife allows the head to escape, and the blade is now carried first above and then outside the great trochanter, keeping close to the bone; and, finally, a second flap, similar to the first, is cut from the tissues on the outside of the limb.



A, artery; F, femur; X, space between bone and artery into which pin is thrust from before backwards; T, elastic or india-rubber band passed around limb and ends of pin on inner side.

This operation can, of course, be modified by tying the femoral and other visible vessels after the first incision; or, when the head is freed, a second pin, an elastic ligature, may be made to encircle the outer flap before it is completely divided. The accompanying rough diagram explains the method. The advantages of this are:—(1) extreme rapidity; (2) complete control of hæmorrhage; (3) the wound is vertical, therefore allows for drainage; cleanly cut, therefore ensures apposition and prompt union; away from the anus, and, therefore, not liable to infection. I trust that other surgeons will at least try the method, which, I believe, will be found most satisfactory. —Thomas Moyles, F. R. C. S. I., in *Br. Med. Jour.*

TREATMENT OF OBESITY.—Frequently the practising physician is called upon to treat obesity in women where this morbid condition constitutes a most tiresome infirmity, and is often a complication of most of the affections of the feminine sex. We advise a faithful trial of the method of

Schwenninger and Oertel, which has given so many excellent results in Germany. The following are the indications which have been laid down by these savants:

1. Elevate the tone of the muscular force of the heart.

2. Maintain the normal composition of the blood.

3. Regulate the quantity of liquid in the economy.

4. Prevent the deposit of fat.

The above indications are observed by the following methods:

1. The cardiac muscle is increased in tone by the augmentation of physical exercise—for example, by ascending elevations. It is necessary to progress with caution; the exercise will be gradual and the amount of work proportionate to the resistance of the subject.

2. To maintain the normal composition of the blood it is necessary that the alimentation should be principally albuminous; it will consist of the lean of beef, roast or boiled, veal, mutton, game and eggs.

We can add green vegetables, such as cabbage and spinach, but fat and hydrocarbons shall be given only in small doses—for example, the amount of bread should not exceed 120 to 180 grammes a day.

3. We should limit each day the quantity of drink—180 grammes coffee, of tea, or milk; 360 grammes of wine; 240 to 480 grammes of water will complete the amount of liquid absorbed in the twenty-four hours. Beer is entirely forbidden. Then, again, transpiration is excited by energetic exercise as well as by baths and coverings.

4 Lastly, the deposit of fat is attacked by the practice of the above-mentioned principles of dietetics.

This, for example, is how we should proceed:

Morning.—The cup of tea or coffee, with a little milk, will represent a total of about 180 grammes, and about 90 grammes of bread.

Noon.—From 80 to 100 grammes of soup, 210 to 240 grammes of beef, roast or boiled, veal, game, salad or vegetable, a little fish if desired, but cooked without fat, 30 grammes of bread or farinaceous pudding (never more than 90 grammes), 90 to 180 grammes of fruit in season, for dessert. It is preferable not to drink at the repast, but in hot weather we can allow from 180 to 240 grammes of a light wine.

Afternoon.—The same quantity of tea or coffee as in the morning, with, as a maximum, 180 grammes of water and 30 grammes of bread as an exceptional concession.

Evening.—One or two boiled eggs, 30 grammes of bread, perhaps a little slice of cheese, salad, and fruits; 180 to 240 grammes of wine, with 120 to 150 grammes of water. —*Rev. de Therap.*

PHOSPHORUS IN THE TREATMENT OF RICKETS.—The use of phosphorus in rickets, so much vaunted by Kassowitz and others a couple of years ago, has not, we believe, found much favor in this country. A very extensive trial of the remedy has recently been concluded by Dr. L. B. Mandelstam, of Kazan, who publishes the results in *Vratch*, Nos. 5, 7, 9, 10 and 11, 1889. These experiments extended over a period of nearly three years, and the number of patients upon whom the phosphorus was tried was 450, their ages running from three months to four years. Of this number, however, 234 were excluded from the statistics, either because they did not take the phosphorus long enough or in the proper way, or because the disease in them was not sufficiently pronounced to make the experiment a satisfactory one.

Of the remaining 216 children, 120 were cured, 43 were markedly benefitted, in 30 no improvement was noted, and in the remaining 23 the treatment was discontinued on account of some intercurrent disease. The remedy was given dissolved in cod-liver oil, in the proportion of one part to ten thousand of oil, of which a teaspoonful was given once or twice a day. When it was not deemed advisable to give cod-liver oil, the remedy was administered, after the formula of Kassowitz, in a mixture composed of $\frac{1}{100}$ part of phosphorus, 15 parts each of gum arabic and sugar, 30 parts of almond oil, and 40 parts distilled water. Dose, a teaspoonful once or twice a day. No other remedy was employed except when diarrhœa was present, and then an attempt was made to cure this before giving the phosphorus.

The following are the conclusions which the author feels himself justified in formulating as a result of these experiments:

1. Clinical observation justifies fully the employment of phosphorus in rickets.

2. Phosphorus acts better, more quickly, and with greater certainty than any other remedies.

3. This drug, when given in smalldoses, even for long periods of time, is well borne by children, and causes in them no unpleasant effects.

4. Phosphorus is especially efficacious in controlling the nervous manifestations of rickets.

5. Periodical measurements and weighing of the children, as well as observation of the osseous structures, show that the disease is actually arrested in its course and cured, in the great majority of cases, under the influence of phosphorus.

Another trial of the same remedy was made by Dr. Shabanova, whose report is presented in *Vratch*, Nos. 16, 17, 18, and 19, 1889. She treated 10 patients, and obtained perfectly satisfactory results in 77. In 22 an improvement was noted, and in 6 cases there was an aggravation of the disease while the treatment was being continued. The first effects of the remedy were seen in an improvement in the nervous symptoms, and later

favorable cases, a change for the better was seen in the general health, and in the condition of the bones and muscles.—*Ed. N. Y. Med. Rec.*

THE ETIOLOGY OF GOITRE.—Dr. Th. Kocher, of Berne, first of all determined accurately in what parts of his own canton goitre was common. On comparing the water of these regions with that of goitre-free neighborhoods, he finds that the one striking difference is that where goitre is abundant the water contains a considerable quantity of organic or organized material, and he concludes that it is this factor which determines the prevalence of goitre in any district. He finds that in certain goitrous parts particular families who have access to special water-supplies in which there is not this quantity of organic matter remain free from goitre, although breathing the same air, living on the same soil, engaging in the same occupations, and eating the same food as their very goitrous neighbors. On comparing the chemical composition of goitrous and non-goitrous water in the Berne canton, the only other difference he found was that the quantity of sulphate of lime was less in the goitrous; but, as it is well-known that goitre is often found in those who drink water richly laden with this salt, this difference cannot explain the great pathological fact. Dr. Tovel has found that the water in goitre-free parts contains a very minute quantity of micro-organisms. And it has further been shown that if goitrous water is injected into rabbits the thyroid gland is very prone to swell, although in dogs the injections have no effect. Kocher's investigations do not certainly completely clear up this difficult subject, but they throw some light upon it, and as such are to be heartily welcomed.—*Lancet.*

ANCIENT AND MODERN SUPERSTITION IN MEDICINE.—Dr. Malcolm Morris (*Pop. Sc. Mo.*) has indicated some points in which mysticism, which was one of its predominent features in the middle ages, still lingers around the profession and practice of medicine. "There remains in the people," he says, "a belief in the efficacy of drugs as drugs—a belief that, as for every bane there must be an antidote, so for every disease there must be a curative leaf or root. Nature is distrusted; disease is still represented by some evil influence to be exorcised. In the popular mind disease walks t earth as a devouring fiend, and has a person- y about it as of old. The phrases 'stricken h disease,' 'visitations,' and 'seizures,' are rivals of the conceptions of primitive times.

. . . . . .

nysticism survives in the courtly phrase and ambiguous language of the modern practi- ier. When sorely pressed by the sick man, physicians' only armory is equivocation, from h draws such verbal weapons as 'the state of the constitution,' 'the tone of the body,' 'the general health,' 'lowered vitality,' and all that kind. . . . . Are these not in some sort a survival of the circle of the horoscope?"

The profession is also at disadvantage because of skepticism, reacting from the implicit faith in drugs of the olden times, which "repudiates all aids and accessories: briefly it states its deliberate opinion that disease is infinitely better left to itself. The natural physiological energy of the body is the prime element in the healing process. This is neither more nor less than modern fatalism—waiting on events. Such a doctrine if successful, would be fatal to medicine." A third evil under which it suffers is materialism, which so far as the profession is concerned "may be carried to an injurious extreme. In modern pathology, for instance, as originated by the German school and taught by its apostles, while men are actively contesting as to the nature or formation of a certain cell—whether it be spindle-shaped, round, or ovoid; whether it be derived from this tissue or that—they are likely to lose sight of the real bearing of the case. By all means respect facts, and you cannot show better respect for them than by using. A medical inquirer is not a mere collator. Collect your facts and then reason from the data you have established. *A collection teaches nothing until it has been arranged.* The tendency at present is, in the majority of instances, to collect everything, and to arrange and to adduce nothing."—*Cincinnati Med. Jour.*

CHLOROFORM AND LOCOMOTOR ATAXY.—Dr. Thiem, having had to give a patient, with slight signs of locomotor ataxy, chloroform for the purpose of examining an abdominal tumour, was surprised to notice that as she was being helped from the room, while still somewhat under the influence of the chloroform, she walked with a typical ataxic gait, though this symptom was not ordinarily present. On watching other patients who were not suffering from this affection trying to walk while still partially under the influence of chloroform, Dr. Thiem convinced himself that the peculiar gait only occurred in the subjects of ataxia in whom the semi-narcotic state brings out the want of coördination in the movements of the legs. The explanation would appear to be that inasmuch as the peculiar gait is not due to any paralysis of the muscles, but only to the want of coördinating power, which is set in action by the control exerted by the muscular sense and the sense of sight, when, as in the case of a half-chloroformed subject of locomotor ataxy, both the central coördinating apparatus and the peripheral regulating machinery are in a more or less inactive condition, there is a double reason for the existence of the well-known jerking and sliding movements of these patients. It would appear then, that in doubtful

cases of locomotor ataxy some assistance towards a correct diagnosis might sometimes be obtained by partially anæsthetising the patient and then observing his gait as he walks across the room.—*Lancet.*

HYDRASTIS CANADENSIS IN DYSMENORRHŒA.—Dr. F. Jordan, of Buda Pesth, in a recent number of the *Pester medicinisch-chirurgische Presse*, illustrates the effect of the fluid extract of hydrastis, Canadensis in membranous dysmenorrhœa by the following case. A nullipara, aged 35, who had had regular profuse menstruation for from eight to nine days since the age of 12, was attacked with very severe hæmorrhage which lasted for eight days, after a slight injury sustained in jumping out of window. Since that time she has suffered the most intense pains at each period, and flesh-like pieces were expelled, which were recognized as detached uterine mucous membrane. From 1872 to 1888 she suffered from severe pains during menstruation, which subsided about the seventh day, when the hæmorrhage suddenly stopped. After a period of remission, which lasted about six hours, the pains came on again with greater intensity, assuming the character of real *dolores conquassantes* and only ceased when the patient had a sensation as if something had slipped down in her abdomen. The hæmorrhage recurred and usually lasted about five days. Treatment of various kinds was tried in vain. In January, 1888, Dr. Jordan had recourse to hydrastis Canadensis, at which 25 drops twice a day were given at each hæmorrhage. The result was that there was only slight hæmorrhage, lasting from three to four days, and very slight pain. Later on the patient began to take the remedy eight days before the hæmorrhage began, when it lasted only three days and the pain became still less. The patient was able to leave her bed during menstruation without pain and hæmorrhage becoming augmented.

RENAL COMPLICATIONS IN WHOOPING-COUGH.—Some time ago Dr. Stefano Mircoli pointed out that he had several times observed renal complications in whooping-cough. Thus, on one occasion, among ten children suffering from the disease, nephritis occurred in two cases, one of which died. The necropsy left no doubt as to the existence of the renal affection. During another outbreak, among thirty-five cases nephritis developed in four. Two of these died, and in one a post-mortem examination was made. The kidneys were examined microscopically, and were seen to be in a condition of severe parenchymatous nephritis. No microörganismscould be seen. Recently Dr. Mircoli has brought forward additional evidence on the subject. In a recent epidemic at Monterrubbiano, of twenty-four patients three died, one from suppression of urine, another from suffocation in a paroxysm of coughing, and a third from marasmus. In the two latter cases, although during life there were were no symptoms of renal affection, on post-mortem examination venous stasis in the kidneys with commencing albuminuria was found. There was also a considerable amount of hæmorrhagic infiltration. Cultures of the kidney tissues gave negative results. Dr. Mircoli believes that the renal affection is due to venous stasis caused by obstruction of the vena cava through the violent paroxysms of coughing. According to him the kidney is affected, in whooping-cough, in 12 per cent. of cases occurring in children.—*London Med. Rec.*

TREATMENT OF HÆMORRHOIDS.—Some time since Unna strongly recommended the use of chrysarobin in hæmorrhoids. A report of twenty-two cases treated with this remedy now comes from a Russian physician, Dr. Kossobudski. True, he did not use the drug in such strong solutions as recommended by Unna (5 to 10%), yet the result was most gratifying. After washing the parts with a 2% carbolic acid, or a 1% creolin solution, and drying them with absorbent cotton, he applied three or four times daily a salve of the following formula:

℞	Chrysarobin, ...	grs. xij.
	Iodoform, ...	grs. v.
	Extract of belladonna . .	grs. jx.
	Vaseline, ...	℥jv. M.

In cases of internal hæmorrhoids he prescribed suppositories as follows:

℞	Chrysarobin, ...	grs. 1¼.
	Iodoform, ...	gr. ½.
	Extract of belladonna, . .	gr. ⅛.
	Cacao butter, ...	grs. xxx.
	Glycerine q. s. for suppository.	

If bleeding was severe, tannin was added to the above. With such therapeusis the pain and bleeding disappeared within three or four days, and the hæmorrhoids had completely shrunk away in three or four months.—*Centralbl. f. Chirurg.*—*Med. News.*

ECZEMA.—The following hints from Lassar's skin clinic are of practical value; we have tested them in eczema. Instead of fats porous pastes are used, made of the purest vaseline with oxide of zinc and starch, rubbed slowly together. These may be readily mixed with most remedies in use; they dry quickly and may be converted into permanent dressings by absorbent cotton, and this gauze be changed when saturated. On the face and other parts not accessible to bandages, a little powdering upon the paste-covered skin will afford a smooth and dry covering, which is easily removed by small oiled rags.

In *eczema of all kinds* the paste treatment o[f] [a]rs

great advantage over ointments. Lassar's usual formula is:

℞—Acid. salicyl., ... 2
Vaselin. flav., ... 50
Zinc. oxid.,
Amyli., ... āā 25

In *parasitic troubles* (herpes tonsurans, etc.) sulphur precipit. 10 per cent., sozoiodol, 5 to 10 per cent., or resorcin, 5 to 10 per cent., may be added. On hairy parts vaseline salves are better.

In ordinary *dry or moist eczema of the scalp in children* the head should be gently washed with chamomile and soap, and then the following applied:

℞—Acid. salicyl., ... 1
Tr. benzoin, ... 2
Vaselin. flav., ... ad 60

In *intertrigo*, penciling with a 3 per cent. solution of nitrate of silver should precede the salve.

For *frost-bites*:

℞—Acid. carbol., ... 0.5
Vaselin.,
Ung. plumb., ... āā 10
Ol. olivæ, ... 5
Ol. lavand, ... gtt. 10

M.—Ft.

For *calming inaflmed skin*:

℞—Zinc. oxid., ... 25
Ol. amygd., ... q. s.

M.—Ft. Pastu mollis.

In *acute eczema*, Lassar warns against watery solutions and compresses.

For *pruritus*:

℞—Acid. carbol., ... 1
Menthol, ... 1.5
Talci, ... ad 50

M.—Menthol powder.

℞—Menthol, ... 2.1
Bals. peruv., ... 5
Ung. Wilsonii,
Lanolini, ... āā 20
(With care on face.)

For *pruritus ani*, sitz baths of tar-water and penciling with 2 to 3 per cent. nitrate of silver solution, also carbolized lead salve.

For *acne vulgaris rosacea*, a peel paste is used.

℞—B-Naphthol, ... 10
Vaselin. flav.,
Sap. virid., ... āā 20
Sulf. præcip., ... 50

To be applied by the physician and to remain ten to sixty minutes; then gently removed and laced by powder or white paste. This is rested after peeled surface is healed; or the ...ving may remain over night:

℞—Resorcin, ... 2.5–5.0
Zinci oxid.,
Amyl, ... āā 5
Vaselin. flav., ... 12.5

M.—Ft. Paste.

—*Int. Klin. Runds.—Times & Reg.*

Reduction of Temperature by a Spray of Water.—Dr. Placzek, Virchow's *Archiv.* advocates spraying the entire body as an efficient means of reducing temperature. In an animal with high temperature, he succeeded in reducing the same two degrees by spraying the body with one and a half pints of water at a temperatue of from 53° to 59° F., and immediately after with three ounces at 95° F. The after-spraying with water of a higher temperature dilates the capillaries, and this induces a consequent loss of considerable body-heat.

Thus in a tuberculous snbject whose evening temperature would at times reach 104° the author reduced the same to normal by using somewhat over one pint of water of from 59° to 66°F. The temperature was with ease kept for four hours at this standpoint and then gradually allowed to rise, but not allowed to reach its former high standing.

Compared to the ordinary method of bathing, this treatment has the advantage of simplicity and comfort, factors not to be disregarded in private practice. The patient simply remains in bed, coverings and shirt are removed, a rubber cloth laid under him, and the *modus operandi* proceeded with. As each application does not require more than twenty-five minutes, it can be repeated several times daily.—*Medical Chronicle.*

Hypnotism and Suggestibility.—Dr. Townes had recently studied the subject of hypnotism in Paris, and claimed that it was a means that had too long been relegated to charlatans. In support of his claim that it should be recognized he cited several cases where patients had been cured by this mysterious agency. He showed that the phenomena of moving tables, etc., are real, that certain of our actions are made unconsciously, dependent upon complicated brain action and also on double personality. Hypnotism is a peculiar psychical state which we are able to create in the subject and which increases his suggestibility. From a medical standpoint the aim is to produce this state, so that suggestion will excite the nervous system to perform acts that will lead toward a cure. Homœpathy, miraculous waters, granules and Brown-Séquard's elixir of life act by suggestion, often resulting in a cure. The author closed by citing the conclusions adopted by the recent Congress in Paris; that hypnotism should be taught in medical schools, but should be under authoritative administration.—*Jour. Am. Med. Association.*

THE INVASION OF THE "MASSEUR."—We must beg our readers to keep a close eye upon the *masseur*. He is bearing down upon unhinged humanity with a steady and relentless stride. He develops in the midst of us, he sails over from Germany and England to us, while, if there are any graduates of Heilgymnastik still left in Denmark, Sweden, or Norway, we should like to know it; for it has appeared to us, after some busy morning, that they have all called. Truly, the *masseur* is among us. He is a man of great resources. As his fraternity increases, he does not lose heart, or complain of competition, or seek protection from the State—he simply enlarges his field. In olden times the rubbing of a stiff knee with officinal linimentum saponis was the centre and circumference of massage; soon, however, we learned how soothing was the emollient and theobromated hand upon the hyperæsthetic skin and diseased muscle. The *masseur* became firmly established as the resourceful prop of hysteria and unfailing staff of morbid locomotion. But then the sinewy and insidious hand began to gather adventitious aids, and seek new worlds to conquer. Having organized its movements into a company of Gallic polysyllables, so that its manœuvres of *tapotiment* and *pétrissage* and *effleurage* should not be mistaken for plain, every-day slap-slap, jab-jab, and thump-thump, it proceeded to attack all the several diseases and organs of the body. Adipose tissue in excess was made to disappear, while glandular tissue, if mammary, was rubbed to make it grow. Massage has now applied itself to diseases of the eye, and granular lids are, *quoad* the granulations, artistically rubbed off; it has invaded the mouth and throat, reducing hypertrophied tonsils, opening the Eustachian tubes, and curing catarrh and deafness. The abdominal viscera were the early and easy subjects for this now illustrious science. The colon's lax vermicular waves are tempestuously hastened, and the modest stream from the smaller bowel has scarcely babbled through the ileo-cæcal valve before it is rushed madly into the rectum. The pelvic organs have of late received the devoirs of this new art; and the uterus has been rubbed and stroked and pommeled, all in pure French terminology, until this martyr-viscus could not help but free itself from adhesions and congestions, and pillow itself gently on its original vesical cushion. Lastly, we learn that the heart is to have massage. The heart has been, we are told by poets, torn and bruised, and bled and broken; but it remains for modern science to see that it shall have *effleurage* and lomi-lomi. There are still a few things left for the *masseur*. Can he not apply *tapotiment* to the brain, or, at least, to the cerebellum? Has he done justice to the kidneys? Might not the ovary receive a course of artistic jabbing before it is removed and bottled? When all fields are conquered, and every viscus springs responsives into blooming juvenescence beneath his learned touch, we recommend the *masseur* to Christian science. —*Med. Record.*

DEATH FROM SUBLIMATE IRRIGATION AFTER ABORTION.—Seven years since, Tarnier introduced the practice of washing out the vagina with weak corrosive sublimate injections. The results proved satisfactory, and the injections came into vogue in German and English, as well as in French, lying-in hospitals, extending freely into private practice. Like every thorough method of counteracting deadly agencies in the human mechanism, sublimate irrigation is not free from danger, and although it greatly reduces the death-rate and proportion of puerperal fever cases in long series of labors, some cases of mercurial poisoning will occur in those series, notwithstanding the most careful administration of the remedy. In this country Drs. Dakin and Boxall have published very minute observations on mercurialism under the above-noted conditions; they appeared in the *Transactions of the Obstetrical Society* for 1886 and 1888. Dr. Legrand read before the Anatomical Society of Paris, in April, a case of twin abortion, retained placenta, and death from acute mercurialism. Between the birth of the first and second child, 10 litres of a 1 in 2000 solution of sublimate were employed to wash out the uterine cavity, twice at an interval of three hours only. Immediately after each injection of sublimate a 2 per cent. solution of boracic acid was thrown up into the uterine cavity; but sublimate had been several times employed for vaginal injection. After the extraction of the second child the boracic solution was injected into the uterine cavity. The intra-uterine injections were discontinued, and boracic and carbolic solutions were used for the vagina. A day later gingivitis, salivation, colic and dysentery set in, and carried off the patient in five days.—*Brit. Med. Jour.*, Sept. 28.

INJECTIONS OF SULPHATE OF COPPER IN DYSENTERY.—Dr. W. Easley reports (*Lancet*) an interesting cure of dysentery by injections into the rectum of sulphate of copper. The patient had been suffering for about a month with the usual symptoms of the disease, and had been treated to little purpose with bismuth, gallic acid, and ipecacuanha. Finally, when he was growing worse, a solution, consisting of ten grains of sulphate of copper and one drachm of tincture of opium, in four ounces of water, was injected high into the rectum by means of a soft rubber catheter. The injection caused no pain, in a few hours tenesmus was relieved, and blood ceased to pass. On the two following days a small amount of blood reappeared, and the injections were repeated, but from that time convalescence was rapid.

THE CANADA LANCET.

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THE NEW BIOLOGICAL LABORATORY.

The handsome and excellently equipped buildings known as the Biological Laboratories of the University of Toronto, were opened on Friday, Dec. 20th, with a series of lectures given by Prof. Ramsay Wright of Toronto University, Profs. Osler and Welch of Baltimore, Prof. Minot of Harvard and Prof. Vaughan of the University of Michigan. With such a brilliant array of talent, it is needless to remark upon the success of the opening; it was such as to reflect credit upon any university and any country, and it must be admitted that in efficiency and advantages for biological study, these laboratories are second to none on this continent. This is a matter for sincere congratulation, among those interested in the higher education of our country to-day. The science, if it may be so called, of pharmacology, has been and is making great strides in all the centres of learning in Europe, and to a less degree in America. Now while we in Canada cannot hope to equal those ntries which contain such centres of learning, cientific attainments, any more than in their lth, there being a more or less constant ratio ween the two all over the world, we shall surely well to emulate them, in placing advantages ain the reach of those who possess the opportity of following up the cognate branches of cal science.

class of student is unfortunately all too few in Canada. We are too young and too poor a country for the rank and file of students to be able to afford the time and money necessary to acquire an acquaintance with physical science as it is understood to-day by specialists in that science.

Certain it is that in every institution the elementary principles of a science must be taught and thoroughly learned, and when those special departments of biology which are of particular interest to those who are qualifying as physicians are being studied, there is a fixed line from which it is not well to diverge too far, for the simple, but absolutely certain reason, that the student's time will not permit it; and when we remember the many attractions which the study of biology possesses, especially when taken up with such advantages as are now to be found in Toronto, the fear is that the mind of the student may digress widely from the more practical applications of the science as it applies to man, and the art of medicine. We are not prepared to admit, as is stated by some, that the man who does not thoroughly know the development of the peritoneal membrane can have only a bungling and imperfect knowledge of that membrane. The clinical characters of this or any other tissue or organ, meaning by this, those peculiar processes and conditions which they evince in disease, are as important generally as is their embryological history, and to the physician far more so; and are in themselves so distinct and peculiar as never to be observed or known by the specialized scientist, whose knowledge is derived exclusively from observation in the laboratory.

The habit of the human mind is always toward extremes, and when we regard the tendency of medical education to-day, we incline to the belief that if in the short space of four years the average student is required to know and to master such extensive departments as those of Chemistry, Biology, Comparative Anatomy, Physics and many others, where there is so much to learn regarding the apparatus used therein, as well as the details of the science, it would not be surprising if some should complete their course in medicine without even having got as far as man—and know very little of the healing art as it is destined to benefit him. We have no desire to criticize severely those to whose labors and laboratory studies the practical physician owes so much, neither have we any desire to do other than commend those who, know-

ing the value of great laboratories of the old world, are desirous that they should be emulated in Canada in researches by experts. Let us however not forget, that whilst biology and comparative anatomy are all-important, we must not allow them to thrust from our minds the claims of "Morbid Anatomy" as applied to man. May we hope to see established an institution where instruction of a higher order may be given in this special branch of biology, which may stimulate research and yield valuable reward.

DOCTOR'S FEES TO THE COLLEGE OF PHARMACY.

In answer to enquiries relating to the conditions of registration under the Pharmacy Act, we submit the following extract from the amended statutes, sec. 31—"Nothing in this Act contained shall extend to or interfere with the privileges conferred upon legally qualified Medical Practitioners by The Ontario Medical Act, provided that where such Medical Practitioner desires to carry on the business of a Pharmaceutical Chemist as defined by this Act, he shall not be required to pass the examination prescribed by the College of Pharmacy, but he shall register as a Pharmaceutical Chemist, and comply with all other requirements of this Act." The fee for registration is defined by sec. 18—"There shall be payable to the registrar of the said college, for the uses of the college, on the first day of May of each year, by every person registered and carrying on business as a Pharmaceutical Chemist, the sum of four dollars. Provided, that in case such person shall carry on such business in more than one locality, the further sum of four dollars shall be payable by him as aforesaid for each such additional place of business. And provided, also, that all employees or assistants who manage, or have charge of such additional places of business, shall be legally qualified Pharmaceutical Chemists."

Sec. 21 declares that "Every Pharmaceutical Chemist carrying on business on his own account, shall display his certificate in a conspicuous position in his place of business."

The form of the certificate is given in schedule D. of the Act. It is merely a yearly license and as stated by sec. 17, every person registered is entitled to receive it.

We have been given to understand that, despite the explicitness of the law, the College of Pharmacy has lately been exacting from physicians desiring registration the sum of ten dollars, besides the legal fee above specified. A sort of so-called diploma is furnished for which physicians have no use, the annual license certificate being alone necessary.

The Act under which physicians conducting drug stores are compelled to register as druggists, was passed in March last, and there can be no doubt but the demand of ten dollars is beyond the powers of the Pharmaceutical Council.

In case the legal fee of four dollars is refused, the College of Pharmacy could be compelled to accept it or be held liable for any damages arising from the refusal.

It is sincerely to be hoped that no doctor carrying on the business of druggist will, through carelessness or indifference, pay the extra fee referred to above. When we consider the position of the average doctor in Canada to-day as to money earned for work done, charity-work, duty on medicines and instruments, it must be admitted that being mulcted in the amount of ten dollars for the privilege of selling drugs is not to be borne.

THE ONTARIO MEDICAL LIBRARY.

The Chicago Public Library has recently transferred, "without conditions," to the Chicago Medical Library its entire collection of medical books. This department was felt to be an incubus there, as it has been elsewhere in public libraries. All who properly may use medical books can consult them in medical libraries. To others they become prurient literature.

It is difficult for the authorities of a general library to determine who should and who should not be allowed to consult, for example, our standard works upon Jurisprudence; and yet these works in the hands of growing boys may become as unhealthily stimulating as the non-religious writings of good Queen Margaret of Navarre. The Toronto Public Library, we are informed, has about concluded a sale of its medical collection to the Ontario Medical Library. We should have been better pleased had the books in question been given instead of sold, but the Public Library Board doubtless felt that they must administer

the trust committed to them to its own best advantage.

In this connection we may remind the profession that the latch-string always hangs outside at the cozy rooms of the Medical Library, and that physicians visiting Toronto are invited to make use of the already large amount of medical literature to be found upon its shelves.

LAWSON TAIT AND THE SURGERY OF THE LIVER.—Mr. Tait writing on the surgery of the liver in the *Ed. Med. and Surg. Jour.*, says:—When first I attacked the liver by surgical operation I certainly was in terror of hæmorrhage, for I thought that if an incision opened a large sinus the arrest of hæmorrhage would be a matter of considerable difficulty, but I was encouraged by an accident which befel me in performing an ovariotomy, for there, on undoing an adhesion to the liver, I tore a cleft in the free edge of the organ, certainly an inch and a half deep, which bled freely, and I was greatly alarmed; but I took a small piece of solid perchloride of iron about the size of a pea and rubbed it over the edge of the tear. The hæmorrhage stopped immediately, and my patient made an easy recovery, so that my respect for the liver greatly diminished. On one occasion I did open by my incision a sinus of considerable size, but I passed a thread by means of a fine needle down one side of it and up the other, and tied the sinus between the two limbs of the ligature. In this way the hæmorrhage was arrested, and I heard nothing of the ligature. I was also in fear of another condition which *à priori*, one might have expected, that it would be difficult to stitch the edge of the wound of a friable organ like the liver to the abdominal wall, and that the stitches would be very likely to give way. As a matter of fact, I have not found it so, and in not a single instance has this given trouble. In my operations upon abscesses of the liver all the cases have recovered but one.

GLYCERINE OF BORAX IN THE DIARRHŒA OF INFANTS.—G. Mansell Sympson, M.B., says in a communication to the *Lancet:* If we regard infantile diarrhœa as due to the excessive fermentation of food in the intestinal canal causing irritation and catarrhal condition of the intestinal mucous membrane, it seems reasonable to look for a remedy to act both on the cause and effect. Glycerine itself is an antiseptic of no mean order, and relieves the pain and congestion of inflamed piles, chiefly mucous surfaces, while every mother knows the virtues of glycerine of borax when applied to the mucous membrane of the mouth. So it was no great step to introduce it further into the ailmentary canal. Whether fed from the breast or brought up by hand, the motions of patients with diarrhœa infantum were like curds of milk, suggesting that the irritated intestine had hurried its contents on as quickly as possible. Again, they were very foul-smelling, suggesting great fermentation. Therefore the glycerine of borax has to do two things: to act as an antiseptic to prevent excess of fermentation in the stomach and intestines, and to soothe the mucous membrane thereof in passing over it. I have found it answer capitally; the children like it, it lessens the griping pains, it renders sweet the offensive motions, and it stops the diarrhœa. One case died while under this treatment; the child was seven months old, had had diarrhœa two days, and was utterly worn out when I saw it. But I suppose there will always be cases which come under our notice too late for cure. I give it as follows: Glycerine of borax, twenty minims; tincture of orange, three minims; distilled water to one drachm. To be given every one, two, or three hours, according to the severity of the case or the age of the patient.

TURPENTINE IN THROAT AND LUNG AFFECTIONS.—Dr. Spohn (*Med. and Surg. Rep.*) says: "I have been using pure oil of turpentine in affections of the throat and lungs for some time, and find better, and more satisfactory results, than from any other remedy I ever tried. I use the ordinary hand atomizer, and throw a spray of the liquid into the throat every few minutes, or at longer intervals, according to the gravity of the case. The bulb of the instrument should be compressed as the act of inspiration commences, so as to insure the application of the remedy to the whole surface, which can be done in cases of children very successfully. It is surprising how a diphtheritic membrane will melt away under an almost constant spray of pure oil of turpentine. I now use the turpentine spray whenever a child complains of sore throat of any kind.

In cases of tuberculosis of the lungs, bronchitis, and the later stages of pneumonia, I have found the turpentine inhalation very beneficial. I use an atomizer, or paper funnel, from which the turpentine may be inhaled at will. I hang around the bed, and in the room, flannel cloths saturated with the oil of turpentine, in all cases of catarrhal bronchitis—in fact, in all affections of the air passages; and my patients invariably express themselves as being very much relieved.

PSYCHICAL AND PHYSICAL CHANGES FOLLOWING REMOVAL OF THE OVARIES.—In an elaborate study of this subject by Dr. Glaevecke (*Archiv. f. Gyn.*, *Med. Rec.*) the author says: "After removal of the ovaries, menstruation ceases permanently in 88 per cent. of the cases, either at once, or after a certain interval, while in the other twelve per cent. the flow becomes scanty and irregular. Vicarious hæmorrhages are rare. In one-half of the cases observed the menstrual molimen persisted after the cessation of the flow. The usual climacteric phenomena, vertigo, irregular sweating, leucorrhœa, etc., are common, as well as the atrophy of the genital organs which follows the establishment of the menopause. Even when the uterus is considerably enlarged, by reason of the presence of chronic endometritis or fibroids, it commonly returns to its normal size after oöphorectomy, or even becomes atrophied. The general condition usually improves after castration." In forty-two per cent. of his cases the patient became stouter. Sexual desire was diminished in the majority of the cases; in some instances it was extinguished. The physical disturbances were most marked, sometimes amounting to melancholia. "In short," says the writer, "removal of the ovaries induces an artificial menopause which is exactly similar to the natural one."

THE EFFECTS OF ALCOHOL ON THE SECRETION OF BILE.—Dr. Cheltsoff has (*Lancet*) recently been making experiments upon dogs with a view to determine the nature and amount of the influence of alcohol upon the secretion of bile. He made biliary fistulæ in the animals, and after all the disturbance caused by the operation had passed off he proceeded to observe the effect of introducing alcohol in various quantities into the stomach. The bile as it was secreted was collected in glass receivers, which were changed every few minutes, the contents being measured weighed, and otherwise examined. The results showed that small quantities of alcohol either have no perceptible effects on the bile or serve to increase it slightly. Large doses, on the other hand, perceptibly diminish the flow, though sometimes there is at first a temporary increase. Medium doses do not give any constant result. Dr. Cheltsoff has come to the conclusion that the alcohol acts directly on the hepatic cells.

TREATMENT OF A COMMON COLD.—Dr. S. Wilson Hope, writing to the *Br. Med. Jour.*, says: It may not be as widely known as it deserves to be that 20 grains of salicylic acid, given in liq. ammon. acet. three or four times a day, will so far control a common cold that the aching of the brow, eyelids, etc., and during movements of the eye, will cease in a few hours, while the sneezing and running from the nose will also abate, and will disappear in a few days, and, more fortunate still, the cold will pass off, and not finish up, as is customary, with a cough. It may be that it is only in persons tainted with rheumatism where we find a chill followed by such a train of troubles, and certain it is that different persons suffer in different ways after a chill. But for a very great number of people of fair health, who are liable to take a common cold, it is highly desirable to avoid a cough, and the salicylic acid treatment places this in our power.

SULPHUR IN A PALATABLE FORM.—In the *Practitioner*, Sir Alfred S. Garrod gives his experience regarding the uses of sulphur taken in small doses, and for a considerable period of time in the treatment of disorders of the alimentary canal and liver; also in certain diseases of joints, especially rheumatoid arthritis; and, lastly, in chronic muscular rheumatism and skin diseases. The form selected by him for the exhibition of the drug is a lozenge containing five grains of the milk of sulphur and one grain of cream of tartar. This lozenge is free from disagreeable, the cream of tartar giving it a pleasant acidulous taste; and it contains enough sulphur for therapeutic purposes. Sir Alfred claims that the stomach itself is probably little influenced by the sulphur, as the surface and contents of that organ are usually acid in reaction

and possess no solvent power; but that when it arrives in the duodenum, and meets with a different condition of the mucous membrane and the presence of bile and pancreatic fluid, both of alkaline reaction, more or less of it becomes converted into a soluble sulphide, which is absorbed by the portal vessels. The presence of the cream of tartar in the lozenge helps to prevent the formation of any soluble sulphide in the stomach, and hence the absence of sulphurous eructations. Sir Alfred Garrod finds that even this small quantity of sulphur usually produces appreciable laxative effects, and patients can be readily induced to persevere in using the lozenges for an almost indefinite time. Sulphur given in the form just described exercises a markedly beneficial effect in many morbid states of the alimentary canal and liver, such as hepatic sluggishness, piles, and hæmorrhoida bleeding; besides which the continual use of the lozenge is often quite effectual in obviating habitual constipation without being attended by the unpleasant action often pertaining to ordinary aperient medicine. Much benefit was also derived from the continued use of the small doses of sulphur in chronic forms of rheumatoid arthritis and gout, and in many cases of muscular rheumatism.

LOCAL USE OF IODOFORM IN DIPHTHERIA.—Dr. Lindley writes to the Boston *Med. and Surg. Jour.* that he has treated nine cases of diphtheria by insufflation of iodoform every three hours. All recovered but one, who died of an inter-current pneumonia. His conclusions are as follows:

1. It prevents the multiplication of bacteria.
2. It is a soothing local anodyne.
3. It is like alcohol, in having no toxic dose where the patient is suffering from the diphtheritic poison.
4. It is so near impalpable that it reaches all portions of the diseased surface.
5. It adheres for a long time to the surface where it is applied, and thus has excellent local effect before it is absorbed

It does not cause nausea, and thus interfere with nutrition.

It does not produce diarrhœa or salivation, as is possible from an overdose of the bichloride.

It is quickly and easily applied.

DOES THE BABY REQUIRE WATER?—This question is frequently asked and is often erroneously answered. It is true of infants, as well as adults, that water is necessary to their proper care. They sometimes require more water than is contained in the mother's milk. The infant is many times permitted to suffer from thirst, which may be the sole cause of its fretfulness. A child, when thirsty, may nurse the breast frequently and still not be satisfied, as evidenced by its paroxysmal crying as soon as removed from it. In such an instance if cold water be given the child will become quiet at once. The physician should be careful to caution the nurse to occasionally offer the baby cold water to drink, and little experience is required to ascertain whether the child wants the water or not. Excess of water does no harm, and it is speedily absorbed, therefore no evil can come of giving the infant large quantities of water, both in winter and summer.

TABLE OF INFECTIOUS DISEASES.—The following useful table, taken from *The Hospital Gazette*, is more complete and extended than the list we gave a few months ago:—

Name of Disease.	*Length of Period.*	*Incubation Usually.*	*Infection Lasts.*
Typhus	1 to 21 days	9 days	3 to 4 weeks.
Enteric	1 to 28 days	15 days.	4 to 8 weeks, till diarrhœa ceases.
Relapsing	4 to 10 days	6 days	Until relapses cease.
Cholera	hours to 10 days.	under 72 hours.	Throughout attack; greatest during height of disease.
Yellow Fever	hours to 15 days.	few hrs.	
Scarlatina	hours to 7 days.	2 days	8 weeks; end of desquamation.
Measles	7 to 14 days	12 days.	3 to 4 weeks, " "
Rötheln	4 to 21 days	15 days.	2 to 3 weeks.
Sma l Pox	5 to 14 days	12 days.	3 to 6 wks.
Chicken Pox	4 to 18 (27) days.	10 days.	4 weeks. } Until every scab is fal'n off
Diphtheria	2 to 12 days	5 days	3 to 8 weeks, until all discharges have cea'd
Influenza	2 to 7 days		(?) 14 to 21 days.
Whooping Cough	7 to 21 days	14 days.	6 weeks or longer.
Contagious Pneumonia	1 to 20 days	6 days.	
Mumps	4 to 24 days	18 days.	3 to 4 weeks.
Erysipelas	1 to 8 days	4 days	Until end of desquamation.
Puerperal Fever	2 to 6 days.		
Rabie	6 days to 2 years.	6 weeks.	Disease usually develops within 4 months

The period of quarantine to be enforced upon the apparently healthy members of a household in which there is infectious disease will be a few days longer than the longest incubation period, dating, of course, from the *last* exposure to the infection.

VERMIFUGE.—The *Journal of Pharmacy* gives the following:—A whole cocoanut, grated fine,

mixed with milk, and taken on an empty stomach on rising, is fully as reliable a tæniafuge as male fern, kousso, or pomegranate, etc., it is far more agreeable to the taste. No after treatment is necessary, as a single dose is usually all-sufficient.

POT. IODID. AS A CARDIAC TONIC.—M. German Sée, says *The Lancet*, has recently pointed out, before the Academy of Medicine, that iodide of potassium, far from being a depressant, is really a cardiac tonic, of almost equal value to digitalis or strophanthns in certain cases. Indeed, he says that iodide of potassium is the real cardiac drug (*vrai médicament du cœur*), since, when prescribed in cases of uncompensated mitral lesions or affections of the myocardium, it increases the cardiac power and raises vascular tension. Thus, by subsequently causing dilatation of the arterioles, it enables the heart to recover its power and affords also better facilities for the coronary circulation, thus improving the nutrition of the heart muscle.

ANTISEPTIC COTTON.—The following formula is given for the preparation of antiseptic cotton:

Biniodide of mercury . . .	8 parts.
Iodide of potassium	3 parts.
Glycerin	120 parts.
Distilled water	2,400 parts.

Absorbent cotton is to be soaked in the solution and then dried.

DIPHTHERIA.—A French method of treating diphtheria (*Weekly Med. Rev.*), consists of swabbing out the throat, twice daily, with the following:—

℞,—Ac. carbolic (concent'd. sol.),	grms.	x.
Camphor, ...	"	xxx.
Alcohol, ...	"	x.
Sweet oil, ...	50—M.	

The camphor is not essential.

In the interval, irrigate the throat every two hours with a one per cent. carbolic solution, by means of an ordinary fountain syringe. Every particle of false membrane should be charred and removed at each sitting.

SPIRITS OF TURPENTINE IN POST PARTUM HÆMORRHAGE.—It is said (Mayne, *St. Petersburgh Woch.*,) that when all the usual remedies have failed in cases of post partum hæmorrhage, the introduction of a piece of lint saturated with spirits of turpentine is always successful. The result is that the uterus invariably contracts rapidly and all bleeding is checked. No disagreeable results have ever followed this treatment. In one case, when the patient was almost pulseless, it even seemed to act as a stimulant.

THE ADMINISTRATION OF SANTONINE.—Dr. Lewis, of Berlin, states that santonine should be given in its least soluble form, as the desired effect is not a general, but a local one. He recommends the administration of it in some oil, such as cocoanut oil, olive oil, cod-liver oil, or castor oil. Some of the ethereal oils, which are so destructive to the lower forms of animal life, would be suitable in this connection.

RINGWORM OF THE SCALP.—The treatment consisted (*Med. Analec.*) in the application of a one per cent. ointment of protochloride of iodine in lanoline. Every second day the head is sprayed with warm water, and then it is dried and rubbed for some time with this ointment. It is possible by this means to cure ringworm of the scalp within a few months without resorting to epilation.

HEADACHES FROM ALCOHOL AND TOBACCO.—The following is said, *St. Louis Med. & Surg. Jour.*, to be an excellent "straightener" after the too great consumption of alcohol and tobacco:

℞—Spts. ammon. aromat.,	. .	℥ ss.
Spt. chloroformi,	. . . .	♏ x.
Aquæ,	. . . . .	℥ j.—M.

Sig.—Pro dosi.

ANOTHER HYPNOTIC.—Chloralamide is a new candidate for favor as a hypnotic. It is a combination of chloral and formanide. The drug is in the form of colorless crystals, soluble in 9 parts of water and in 1½ of spirit. The dose is from 15 to 60 grains, and its action is produced in about half an hour, the sleep lasting from 6 to 8 hours. It is said to have no effect on delirious or great excited patients.

MALARIAL FEVER.—Dr. H. A. Sutwiler, of Flat nia, Texas, recommends (*Galliard's Med. Jou* cincho-quinine in those cases where the sulpha cannot be borne, giving fifteen grains at a dos to be repeated in two to four hours. It has giv him the happiest results.

TREATMENT OF PHLEBITIS.—Muselier recommends (*L'Union Méd.*), the following:—In cases of simple phlebitis, leeches should be applied and unctions of mercurial or opium ointment thoroughly rubbed in. Local baths are to be used if the inflammation involves an extremity. If the vein suppurates, free drainage is at once to be established, it being remembered that in spontaneous phlebitis the danger resides in the possibility of embolism. To prevent so grave an accident, the limbs should be placed in cushions and elevated in such a manner as to favor the venous circulation toward the trunk and the disappearance of the œdema. Fixation is also a necessary accompaniment of the treatment, and all abrupt movements are to be avoided lest embolism should occur, and even in the application of mercurial ointment violent rubbing should be avoided for fear it might dislodge a clot. If the phlebitis is of long duration and there is much œdema of the limb, it may be well to apply an Esmarch bandage, and if, as a result of this compression, atrophy of the muscles occur, recourse must be had to electrical currents, massage, and baths.

INTESTINAL OBSTRUCTION.—Jonathan Hutchinson gives the following (*Arch. of Surgery*) as the principles which guide him in all cases of acute intestinal obstruction: He believes that in all cases in which obstruction is recognized, whether the symptoms are severe or mild, one of the first measures adopted should be the administration of an anæsthetic, under the full influence of which, intestinal spasm will be relaxed, and the passage of scybalæ, gall-stones, or other impediments favored. While anæsthetized, the patient's abdomen should be carefully examined by the surgeon, who should also use enemata, and practise abdominal taxis. An accurate diagnosis of the cause of obstruction is not often possible, and the early use of anæsthesia and taxis is successful in many cases, whatever the causation, and prejudicial to few. If these measures fail, and the symptoms increase after anæsthesia, exploratory laparotomy should be resorted to.

Intussusception in infants under one year should be treated wholly by taxis and enemata, as the prospect of recovery after abdominal section at this age is exceedingly slight. In older children, enterotomy is probably the best treatment. If the diagnosis is plugging of the gut by a gall-stone, belladonna should be freely administered, and if pain is severe, prolonged anæsthesia; also systematic efforts should be made to force enemata beyond the ileo-cæcal valve. Under no circumstances does this latter condition justify an operation, as with the above measure the probabilities of recovery are great. In cases of long duration, either the "rest, opium, and starvation plan," feeding entirely by the rectum, or repeated recourse to taxis and large enemata, should be adopted.

Mr. Hutchinson describes his method of taxis thus: Under full anæsthesia, the bladder and the bowels being empty, the surgeon forcibly and repeatedly kneads the patient's abdomen, pressing its contents in all directions. The patient is then turned on his abdomen, upheld by four strong men, and vigorously shaken. Following this, he is supported by the feet, copious enemata given, and, while still in this position, vigorously shaken upward and downward. The latter, Mr. Hutchinson considers exceedingly important. However rough such treatment may seem, it is in no sense unscientific, but thoroughly rational, and its efficacy is attested by the reports of Mr. Hutchinson's cases.

PROTRACTED CONSTIPATION.—In Dr. James O'Beirne's book, *New Views of the Process of Defecation*, Dublin, 1833. The author gives (*Br. Med. Jour.*) the history of the case of a girl aged 19 who "had not a stool of any kind, or passed even flatus per ânum since early in the preceding December, a period of nearly six months."

SHINGLES.—E. M. Sympson, M.B., writes to the *Br. Med. Jour.* that "the best local application to the vesicles in herpes zoster is flexile collodion. This quickly shrivels them up, and I fancy prevents the appearance of any, where it has been painted on. I feel sure he will not be disappointed with it."

TUBERCULOSIS FROM CIGARS.—It is stated that a German physician, on examination of a number of cigar tips, found that many of them were infected with tubercle bacilli. The makers were tuberculous, and in the manufacture of the cigar, moistened the tips with their saliva.

ELECTIONS FOR THE MEDICAL COUNCIL.—We beg to call attention to the advertisement, appearing in this issue, of the election of the Medical Council. It is important that the voting papers should be promptly filled in, and returned to Dr. Pyne, the Registrar.

As Dr. Sheard, the business manager of this journal, is in New York, remittances, etc., will not be acknowledged for about ten days, but this should by no means stop the remittances. Send them along.

The Royal College of surgeons has passed favorably upon Sir Morell MacKenzie. He was censured for publishing his book concerning the Emperor, but at the general meeting he had but one accuser.

WE are pleased to note that Dr. D. C. Meyers, L.R.C.P., London, Trin. '88, recently received the diploma, of M.R.C.S. Eng.

Dr. J. Gibb Wishart having severed his connection with Dr. Ryerson, is now carrying on his specialty at his office, Carlton Street.

IN France the doctor's claim on the estate of a deceased patient has precedence of all others.

DR. D. C. MEYERS (Trin.) has lately passed the L.R.C.P. London examination.

M. RICORD, the famous Paris physician, died lately of a double pneumonia.

Books and Pamphlets.

THE PHYSICIAN'S VISITING LIST FOR 1890. (Lindsay & Blakiston's). Philadelphia: P. Blakiston Son & Co., 1012 Walnut Street.

Contents.—Almanac for 1890 and 1891; Table of Signs to be used in keeping accounts; Marshall Hall's Ready Method in Asphyxia; Poisons and Antidotes; The Metric or French Decimal System of Weights and Measures; Dose Table; List of New Remedies; Posological Table, Meadows; Disinfectants and Disinfecting; Examination of Urine, Dr. J. Daland; Incompatibility, Prof. S. O. L. Potter; Table for Calculating the Period of Utero-Gestation; Sylvester's Method for Artificial Respiration; Diagram of the Chest; Transportation of injured persons. Regular edition—For 25 patients weekly, $1; up to 100 patients, 2 vols., $3.

New Monthly Edition, without dates,

Requires only one writing of patient's name for the whole month; plain binding, without flap or pencil, 75c.,; leather cover, pocket and pencil, $1. This book is made in all sizes and styles to meet the wants of all physicians. It is not an elaborate, complicated system of keeping accounts, but a plain, simple record, that may be kept with the least expenditure of time and trouble—hence its popularity. It can be bought through any bookseller, or, upon receipt of the price, will be sent postpaid by the publishers to any address.

CHRONIC BRONCHITIS AND ITS TREATMENT; a Clinical Study, by William Murrell, M.D., F.R.C.P., Lecturer on Pharnacology and Therapeutics at the Westminster Hospital; late Examiner in Materia Medica in the University of Edinburgh, and in the Royal College of Physicians of London. London: H. K. Lewis, 1889. Toronto: Vannevar & Co.

Our readers will have noticed extracts from papers by Dr. Murrell, on the subject of chronic bronchitis, winter cough, etc., in our columns, and those of them who have followed the advice then given, especially as regards inhalation, will have reason to be thankful to him for his studies in this direction. The present work is a record of clinical work, and the results thereof, extending over a period of about ten years. The book is small, inexpensive and clearly written. It is one of the best and most satisfying efforts in its way that we have seen in a long time.

THE CURE OF CROOKED AND OTHERWISE DEFORMED NOSES. By John B. Roberts, A.M., M.D., Professor of Anatomy and Surgery in the Philadelphia Polyclinic, Lecturer on Anatomy in the University of Pennsylvania, Surgeon to St. Agnes' Hospital. Philadelphia: P. Blackiston, Son & Co., 1889. Toronto: Carveth & Co.

An interesting and instructive little trochu e of 24 pages. Illustrated.

Births, Marriages and Deaths.

At Grand Valley, Ont., on the 13th Decemb r, the wife of R. R. Hopkins, M.D., of a son.

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TREATMENT OF ACUTE IDIOPATHIC PERITONITIS.

BY JAMES NEWELL, M.D., L.R.C.P. AND S., DETROIT, MICH. *

I venture to make the assertion that no member of this Association will deny that acute Idiopathic peritonitis is a disease of very grave significance, and that the physician (whose lot is may be) who is called upon to combat the malady, not only often meets a foeman worthy of his steel, but an enemy whose overthrow calls out every resource of his art, and all the available means which he can command. Therefore, unless he has both a proper and distinct conception of the leading principles which are to govern him in his conflict with so dangerous and relentless an enemy, the result may frequently be both unpleasant to the physician and disastrous to his patient. As it is a disease in which I have taken a great interest for a number of years, during the most active period of my professional life, and in which I have (not without being probably thought egotistical) had unusual opportunities of observation and acquaintance, I shall endeavour (though feebly and imperfectly it be) to pourtray what I conceive to be the proper and essential treatment of the disease. As to the frequency with which acute idiopathic peritonitis occurs, I must say that my experience is not in accord with the standard authors; for the state it is a disease rarely, if ever, encountered. However, I venture the opinion that certain portions or districts of country may and do exercise a modifying influence on the prevalence of the disease, and in consequence in some localities it will be much more frequently met with than in other

As examples—during the years intervening between 1871 and '78 I practised my profession in the County of Elgin, Ontario, and during these seven years saw but one or two cases of acute idiopathic peritonitis. I had during this time and since made frequent and numerous enquiries of physicians practising in other parts of that Province and been informed that they seldom if ever met the disease. In the year 1878 I removed to Wyoming, in the County of Lambton, Ontario, and followed my profession there until I came to Detroit about a year ago. Now, whether it was owing to some peculiarity in the constitution of the people, paludal or miasmatic causes, or to the geographical position of the county (being bounded on the north by Lake Huron, and on the west by the River St. Clair, and exposed to sudden cold moist winds), I am unable to say; but acute idiopathic peritonitis was a disease quite frequently met with, both in its mildest and severest forms. For some time after my arrival in that district I was very much inclined to doubt the accuracy of my diagnostic powers and those of my professional confreres, until the frequency with which the disease occurred forced me to the conclusion that it was acute idiopathic peritonitis, and that our diagnoses were correct. I am in a position therefore to assume that this is a disease with which I have had considerable familiarity and experience, and that the conclusions at which I have arrived regarding the principles of its successful treatment are based more upon experience rather than upon theories or ideas obtained from a reading of the standard books and treatises. The successful treatment of acute idiopathic peritonitis resolves itself, in my mind, into two leading principles or indications, and which are to be kept constantly before the mental eye:—*Rest, and comparative freedom from pain.* By rest I mean absolute quiet of body. That I may the better impress this cardinal fact upon the minds of my hearers, I cannot forbear introducing the following extract from John Hilton's treatise on "Rest and Pain," as it is so appropriate to the subject. I ask the indulgence and forbearance of those members of the society who are familiar with the work and the lesson it so admirably teaches; but lest there be any in this audience who may not have fully grasped and comprehended the beneficial significance of rest in restoring the lost integrity of

* Read before the Detroit Medical and Library Association, 1889.

inflamed tissue is my excuse for the digression :—

"I would ask you to suppose a serous membrane inflamed—what happens when this takes place? When it is not traumatic, but dependent upon some internal cause (quite irrespective of any direct local lesion), almost immediately a considerable quantity of lymph is effused, and this after a time coagulates spontaneously upon the free surface of the serous membrane, and thus at once prevents the ill effects of further friction. If inflamed serous membranes are allowed constantly and freely to rub upon each other it is impossible but that the irritation must be considerably increased, but by the coagulation of the lymph upon the free surfaces, they are protected against direct friction. Such is the case in the opposed surfaces of the abdominal viscera and their parieties, or in the heart and the opposed surfaces of the pericordium. As soon as the lymph is poured out, the serous membrane, as far as it can be, is put in a state of rest or freedom from friction. When the original disturbing cause has become exhausted or removed, then I apprehend that in consequence of the rest which the serous membrane has experienced through the effused lymph, it is able to recover or resume its normal function of rapid absorption. Thus we see the effusion apparently performing two purposes—preventing the friction between two inflamed surfaces, and that being accomplished, giving nature a fair chance of removing the original disturbing cause. Here the rest has so far contributed to the restored integrity of the serous membrane, that it has enabled it to recover its natural function—that of rapid absorption, and the first act its of renewed health and vigor is to absorb that effusion, which was the primary result, whatever the disturbing cause might have been. Thus, then, the lymph prevents friction and aids absorption. In this way I apprehend, nature does her best to repair injuries, whether they be the result simply of accident or other excitant of the inflammatory condition."

As these are the words of a man of great learning and sound professional skill, they are worthy of deepest consideration and attention, serving as a guide or finger-board to show us the way to a safe termination of acute inflammatory diseases. To resume: On the onset or beginning of the disease the sufferer should be undressed and put into a comfortable bed, and absolute rest of body enjoined. Great relief is often experienced from the application of heat to the abdomen; quite frequently more relief is obtained by moist than dry heat, and for which purpose a flannel or piece of spongiopiline wrung out of very hot water should be applied to the belly. When hot water is not obtainable and the onset of the disease is sudden and abrupt (almost explosive, as it were), as it very frequently is, a plate heated in the oven, or a hot stove lid wrapped in a piece of wetted flannel can be used until better and more effective means can be obtained. Care should be taken not to burn or scald the abdomen, as I have witnessed on several occasions, as it is wonderful the degree of heat which the sufferer is able to bear in the explosive form of onset or attack. In robust and healthy young subjects the abstraction of 12 to 16 oz. of blood from the arm by venesection has in my hands sometimes nipped the disease in the bud, and, as it were, extinguished the conflagration. I would only advise venesection when the attack is very acute; in robust young males, and not later than twelve hours after the advent of the disease. The opening in the vein should be large, the abstraction of the blood rapid, so that a sudden impression be made on the system. The effect produced, not the quantity of blood lost, is the proper guide. If the pulse is rapid and hard I give one drop of fluid extract of aconite root every fifteen minutes, until the pulse becomes softer and the skin moist. However, great care and caution are required to not continue the aconite too long, for sudden depression and adynamic symptoms may suddenly and unexpectedly supervene in this disease. I now come to speak of what I conceive to be the true and essential treatment of acute idiopathic peritonitis, as I consider the foregoing but auxiliary and subsidary thereto—I mean *full and repeated doses of opium*. When called to a case, if the pain is severe, and there is great uneasiness, as shown by the patient frequently changing his attitude an making outcry, or there is a condition of shoc sometimes as severe as after a grave injury, ar very much more alarming both to physician ar friends, it has been my rule to administer hyp dermatically from one-fourth to a half grain sulphate of morphia, and to repeat in half an ho until the pain is subdued and the patient is ea Of course in such a case I would not think

giving aconite. If the case is not so urgent I am in the habit of dissolving one grain of sulphate of morphia in eight teaspoonfuls of water and giving a teaspoonful every 10, 15 or 20 minutes until relief is obtained. However, I am of the opinion that the hypodermatic method is the better one, except in children. When the acuteness and poignancy of the pain have been obtunded (for there is no disease in which the pain is more agonizing), I put the patient on full doses of pulverized opium, say two grains every two hours, and keep him narcotized, not, however, that he cannot be aroused, for I consider that dangerous; but, so he lies dozing and free from pain. The sooner this condition be brought on the better, and if two grains of opium every two hours will not have the desired effect (sleep, and freedom from pain), I increase the dose to three or four grains every two hours, or until the necessary effect is produced. I continue the opium in diminished or increased doses, as the exigency of the case may demand, until the pain and soreness of the abdomen have almost entirely vanished. When, in the course of the disease, symptoms of adynamia occur, as shown by subsultus tendinum, mild delirium, etc., I combine pulverized camphor, 2 to 5 grains, with each dose of the opium, and have had excellent results from its use. When the tongue is covered with a coat of a yellowish color, I have found a few small doses of calomel or grey powder have a good effect, but that mercury has any modifying effect on the serous inflammation has not been my experience. When there is impending or actual cardiac failure, as shown by the pulse, and diminished first sound of the heart, the quantity of opium must be lessened, and belladonna combined with the camphor. I have not found alcoholic stimulants so effective in this condition as have others. When there is failure of the respiratory centre, as shown by the slowness and shallowness of the respiratory effort, and which may be owing to the heroic doses of opium or the poison generated by the inflammation, it is imperative to diminish the quantity of opium, and give strychnia or nux vomica, with a strong infusion of coffee or

My experience is that opium is not nearly so paralyzing to the respiratory and circulatory centres as morphia, and, consequently, for years I have not given the latter except at the onset of the disease, when I wished to get a sudden and rapid effect. When convalescence has set in, I think one or two grains of quinine 3 times a day is beneficial. As to the bowels, *I let them alone*, and if there is not an evacuation at the end of 10 or 12 days, providing the peritoneal inflammation has pretty well subsided, I administer an injection of warm water, and sometimes add to it four ounces of sweet oil. I have had much better results with letting the bowels alone and giving them rest than have those who have given laxatives, cathartics, or enemas, producing a passage every day or two. I have in some cases had to regret having opened the bowels *too soon*, but never for having waited until the acuteness of the attack was over and the inflammation had pretty well subsided. In reference to local medicated applications to the abdomen, the tincture of opium has given excellent results, and if there is much tympanites combining it with spirits of turpentine. Puncturing the inflated intestine with a hypodermic needle in this condition has not in my hands proved the success that might have been anticipated. Sometimes I have applied the blue ointment, but the oleate of mercury makes a much nicer and cleaner application. In case of lingering patches of inflammation, where it has been parietal, the application of cantharidal collodion has hastened resolution. Special attention must be given to the condition of the bladder, for there may be retention of urine, and which is frequently produced by the opium or the inflammation. In such cases the catheter must be used every 8 hours. For nourishment I confine the patient to a milk diet, and give it raw, boiled, or peptonized, as may best agree; sometimes diluting with lime water or chilling with ice is useful, if there is vomiting. If there are symptoms of sinking and prostration, to the milk I add cream, eggs, and whiskey. Beef tea or its essence I *taboo*, as it is apt to produce tympanites, and contains but a very small amount of nourishment.

As a general remark, I wish to put the fact on record, that acute ideopathic peritonitis is not a disease which always runs a typical course, as we might have been led to believe from its description in some of the books. Sometimes the pulse will be found slow, even below the normal, and not much changed in character, and the temperature normal, and in a few cases subnormal. Such patients are suspicious, require to be closely

watched, and the strength carefully husbanded. At the risk of incurring repetition and prolixity, I recapitulate the essentials of treatment.: Physical rest of body, thereby preventing friction and injury of the inflamed and exquisitely tender surfaces. Quiet and rest of peristaltic action of the bowels, which can only be brought about and induced by opium or its derivates. Some one has well named opium the "splint of the bowels," and such benificent action is, I apprehend, the chief indication it fulfils when given in sufficient doses in peritonitis—subserving the same purpose as a splint applied to a fractured bone.

In addition, by allaying the general irritability of the system and easing the suffering (for intense pain is a terrible depressant and sometimes kills), the patient is put in the best possible condition to allow nature to remove the results of the inflammation and to promote recovery. "Repair is but the repetition of growth. The same elements, the same kindred conditions, are necessary to the same results. Rest is the necessary antecedent to the healthy accomplishment of both repair and growth. This surely is the natural suggestion of a means towards an end which should never be lost sight of by the physician and surgeon."*

By following the line of treatment laid down, I have had good results in treating acute idiopathic peritonitis, and it has not been nearly so fatal as is generally the case when treated by other methods, but it is a *sine qua non* that the opium be pushed with an heroic hand that almost partakes of fearlessness, until a state of narcotism is produced that keeps the patient dozing and free from suffering. This is the critical point at which, in my experience, some physicians falter and fail, their prudence being more conspicuous than their courage. What is wanted is happy combination of both qualities, which will measure it not by the quantity given, but the effect produced, remembering that hesitation may mean death to the sufferer, and that "obstinacy in a bad cause is but constancy in a good one." †

In cases of *bronchitis in children*, tending to spread downward and become capillary, Prof. Da Costa recommends the administration of iodide of potassium.

* Hilton, "Rest and Pain." † Religio Medici.

THE ABORTIVE FORMS OF TYPHOID FEVER.*

BY A. M'PHEDRAN, M.D.,
Lecturer on Clinical Medicine, University of Toronto, etc.

To some it may seem superfluous to occupy the time of the Association with the discussion of a subject such as this, on which their opinions are quite decided; yet with many there is grave doubt that typhoid fever does abort, and not a few who are of sanguine disposition not only wrongly believe that typhoid often runs an abortive course, but that they can, with proper medication, abort cases that would, if left to themselves, run an ordinary course. Such being the diversity of opinion in the profession, it scarcely needs an apology for introducing the discussion of this phase of a disease with which we are all so familiar, and which annually destroys so many valuable lives.

Cases of slight feverishness, with headache, malaise, and anorexia, lasting a few days, but without distinctive symptoms, the *febricula* of some authors, are met with in all seasons and in all conditions of life. They have no constant cause or pathology, but are as various as the febrile diseases to which we are subject. Some are due to non-specific, others to specific causes. Of the non-specific causes are such simple catarrh of pharynx, bronchi, stomach, intestines, etc.; while of the specific are the numerous cases of febricula we meet with during the prevalence of the essential fevers, and are doubtless abortive cases of these fevers. We often meet with cases of whooping cough, for example, which are so mild that we would have no suspicion of their specific character but for their occurrence in association with well-developed cases of that disease. Similarly, in diphtheria, some cases are passed unnoticed, while others are detected only by their association with typical cases, or by the unfortunate circumstances of their proving the source of infection to others in whom the disease may prove of the most virulent character. No one hesitates to attribute the feverishness and sore throat of those nursing cases of scarlet fever to the poison of that disease; they are simply abortive attacks of scarlet fever. Similarly, in regard to all the

*Read before the Ontario Medical Association, June, '89.

the other eranthemata. All admit that many abortive cases occur. We might go farther and say that there are few, if any diseases, which, in some individuals do not run an abortive course. If this is true, why should typhoid fever be an exception, and never run an abortive course? To deny that it never aborts would be unreasonable in theory, and is equally so in practice. It is only in the more recent works in medicine that we meet with any recognition of the abortive form of typhoid; in former editions of Flint, Bristowe, Reynold's System, etc., no reference is made to it.

It is the fashion, widely among the public, and but little less so in the profession, to look upon all cases of feverishness with malaise and headache, occurring apart from colds, etc., as due to malaria, and this, too, in districts in which malarial fevers are all but unknown. In this city, where cases of ague other than those imported are now seldom met with, we often hear malaria assigned as the cause of such indispositions. Many of these are doubtless abortive attacks of typhoid fever. The following cases, which are fairly illustrative ones, occurred in my service at the Toronto General Hospital last year. They all suffered from headache, *malaise*, stupor and prostration in greater or less degree:

Case 1.—Agnes B., æt. 12, took ill on August 28th, 1888, with headache and vomiting. Had some diarrhœa a day or two afterwards. She was admitted to the Hospital Sept. 4th, with a temp. of 104°. Had slight diarrhœa next day. Spleen perceptibly enlarged. Temp. fell rapidly, and was normal on 8th. No rash, tympanites or iliac tenderness. Duration, 10 days at most.

Case 2.—John M., æt. 18. Admitted Sept. 25th. Had been ill one week; had some diarrhœa before admission, and cough. His brother had typhoid fever for six weeks. Unsanitary premises. Temp. on admission, 102⅘°. Normal on 28th. Duration, 7 to 10 days.

Case 3.—Alice A., æt. 17. Took sick on Sept. d with headache, while out walking. Vomited returning home. A laxative was given and rrhœa followed for 2 or 3 days. Admitted t. 27th. Bowels loose after admission. No h. General appearance typical of typhoid er. Temp. normal on Oct. 3rd. Duration, 10 11 days.

Case 4.—T. A. æt. 17. Admitted Sept. 29th. Temp. 102⅘°. Ill about one week; bowels constipated. Temp. normal Oct. 4th. Duration, 10 to 12 days.

In two of these cases the duration of the fever was probably not more than 7 to 10 days; in the other two it was within 12 days. In all the onset was definite; the temperature rapidly attained its maximum, and its subsidence was rapid, occupying 2 to 4 days. These are the characters of abortive typhoid, of which these cases are typical examples.

In the next three cases, while the duration is short, all within seventeen days—yet some may object to them being called abortive. It would at least be admitted that they occupy a position midway between the ordinary and abortive forms.

Case 5.—S. Smith æt. 23. Lived on unsanitary premises; typhoid in the neighborhood. Sick one week when admitted 25th September, with temp. 102.5°, its maximum. Had some diarrhœa for 3 days. Temp. normal on Oct. 3rd. Duration 14 to 16 days.

Case 6.—Wm. D., October 28. A commercial traveller. Took sick Oct. 3rd, chilliness, headache, etc. Consulted physician Oct. 5th, when he was told he had a fever. Admitted Oct. 8th. Temp. 100¾°; next day reached its maximum 103°. Bowels constipated throughout. A slight rash; other symptoms typical. Temp. normal Oct. 8th. Duration about 14 days.

Case 7.—Miss B. A nurse in the hospital. This case having been under observation from the commencement of the disease, the record is complete. The fever began on Oct. 28th, the temp. rising in the typical typhoid manner reaching its maximum in 4 days, 103°, fell to normal again on Nov. 14th. Duration really only 16 days. There was no rash, and the bowels were constipated throughout, the general condition that of typhoid fever.

It occurs to all practitioners to meet many cases such as these, mild cases bearing a general typhoid appearance, occurring under conditions that give rise to that fever in others, yet without many of its more typical phenomena. In private practice these cases are seen too infrequently to furnish data sufficient for a positive opinion. According to almost all writers the temp. quickly attains its maximum which is usually not more than 103°, but may be 106° even; this after a few days su[b]

sides, in two or three days to the normal, the whole duration being from 7th to 12th or 14th day. Griesnger reports a case whose duration was only five days. And Liebermaster says that cases occur without pyrexia, there being only a slight non-febrile catarrh of the intestinal tract. There is no tympanites or abdominal tenderness. Constipation is the rule. The spleen will usually be found somewhat enlarged. The rash is often absent, when present it usually appears early, even by the 2nd day.

There is nothing in the beginning to distinguish these cases from the ordinary, except it be that often they begin with some chilliness and it may be with sweating. The diagnosis will often have to be made from the circumstances under which the cases occur, just as we diagnose abortive cases of the other essential fevers.

The bowel changes in these cases may, in the mildest, be confined to a slight catarrh of the lower part of the ilium, as pointed out by Liebermaster, with probably slight swelling of the Peyers patches and solitary glands. In cases with pyrexia for 8 to 12 days there is probably considerable infiltration of the glands, but without ulceration resulting, resolution taking place by absorption of the effused material. In the more protracted ones there may be slight ulceration of the surfaces of the glands, such as is met with high up in the illium in ordinary cases, but no sloughing.

Cases of abortive typhoid are to be carefully distinguished from those mild cases known as "walking" or "ambulatory" typhoid in which, though the symptoms are mild, they are protracted to the usual duration of the disease and in which the ulceration in the intestines may be both deep and extensive. The symptoms are not due to the intestinal lesions and therefore there is no definite relationship between them—in the severest cases the lesions may be only moderate, while it is not unusual for cases of "walking typhoid," to be suddenly stricken down by perforation. It is of importance to diagnose abortive cases of typhoid fever chiefly because they may become the sources of infection for susceptible persons unless the discharges are disinfected or destroyed.

Admitting that typhoid fever does abort in many who contract it, this very practical question presents itself for solution, viz.: Are we able by early and prompt means to cause the abortion of cases that would otherwise run an ordinary? I know some would answer this in the affirmative, and many remedies have from time to time been recommended for the purpose. I feel convinced that such opinions are due to the fact that the natural history of the disease is overlooked, and the natural short course of the disease in many cases attributed to the remedies used. In our eager search after specifics for diseases of all kinds we are too prone to forget, when we have had a more than usually successful result in a series of cases, that diseases have a natural history which is subject to great variations under varying circumstances. We congratulate ourselves that the favorable turn in events is wholly due to our management, and that nature counts for nothing. The sooner we thoroughly awaken to the fact that our materia medica contains *no* specifics for constitutional diseases the sooner will our therapeutics be freed from empiricism and become rational.

All the remedies to which abortive powers have been attributed, may be divided into two classes, viz., the disinfectant and the purgative. Of the disinfectant class a combination of carbolic acid and iodine may be selected as the representative; it has been most widely commended. Some years ago I had, what appeared to be, the most gratifying experience with this combination. Later experience showed equally favorable results with other remedies, or even with placebos. Any lingering confidence I had in the efficacy of carbolic acid and iodine was rudely destroyed by my hospital experience last year, in which case after case did badly on them, as they doubtless would on any medicine that could have been prescribed. The largest quantity of the mixture that can be given is too small to have any appreciable effect in disinfecting the intestinal tract, and a positive objection to its use exists in the fact that it not infrequently disturbs the stomach and causes vomiting.

Of the purgation class, calomel has been most widely used. Wenderlich claims for it the power to abort the disease, but the evidence against such a claim is overwhelming, as it is also against corrosive sublimate. Given in the first days of the illness calomel is, however a valuable and efficient purgative, mild in its action, and possessing considerable antiseptic properties. Its action on the bowels is followed by more or less fall of temper-

ture, which may be permanent. This result, when not occurring spontaneously, as it does frequently, no doubt, is due merely to its purgative action, as equally good results may be obtained by the administration of castor oil. The purging removes from the intestinal canal, the decomposing fæcal matter, together with the poisonous alkaloids produced by the disease germs, but the calomel can have no power either to inhibit or destroy the micro-organisms themselves.

Then, while neither these nor any other remedies yet discovered, have the least power in aborting typhoid fever, and the present status of therapeutics and pathology offer us little, if any hope of our ever attaining such a consummation, yet our efforts in this direction have not been all a failure. That much has been done to mitigate the disease and reduce the mortality, we have but to consider present results of treatment with those of a decade or two ago. Prevention is, however, the only course that promotes complete satisfaction.

Correspondence.

MEDICAL EDUCATION.

To the Editor of the CANADA LANCET.

SIR,—From what I have been able to learn as to the views of the medical men in this division, in regard to Medical Education, I believe it safe to say, that a considerable majority of them regard, as I do, with anxiety if not alarm, the movement which has made the old Toronto School of Medicine, practically a Government Medical School by making it the Medical Department of the Provincial University, thereby excluding the possibility of other Medical Colleges deriving any benefit from any of those advantages which have been and are now being secured to the Provincial University at the expense of the Province, and which prior to the creation of University Medical Faculty were equally open to all students of Medicine who chose to avail themselves of them, as they should be in a university truly Provincial in its character.

It is difficult to see any good reason why the Government should enter the field of Medical Education and use the resources of the Province in an effort to build up one Medical College, in no respect superior to others, and to "down" the other chartered Medical Colleges as far as may be in their power to do so. These colleges will come out all right for the sympathy of the Profession and of the public is fully with them.

The public have not asked for this action on the part of the Government and on a popular vote, not two per cent. of the people would vote for it, because they don't want a monoply or any thing which looks like an attempt to create one, in Medical Education.

The Medical Profession have not asked for it, and on a vote, a large majority would certainly be opposed to it. The minority would consist chiefly of the immediate friends of the one Medical School referred to.

The interests of Medical Education do not call for it. The present position of Ontario in regard to medical matters is extremely good, and the graduates of all her schools take prominent positions in whatever parts of the world they are found. This has arisen in part from the stringent provisions of the "Ontario Medical Act," and in part from the wholesome competition and generous rivalry of its Medical Colleges.

I submit that it is not in the interest of Medical Education that this wholesome competition should be replaced by a would-be monopoly—that our active, energetic Medical Colleges should be injured in any degree by a State-subsidized Institution.

No educated man in, or out of, the profession will question the advisability of affording opportunities for the highest possible education in all the various subjects closely related to medicine; but if the resources of the Province are either directly or indirectly made available for this object, they ought to be so applied that the benefits may be freely and equally available to every student of every medical college in the Province.

The scheme of Medical Education which the Government is apparently trying to carry out is not only grossly unfair to the other Medical Colleges, but is opposed to the wishes of the public at large; is not desired by the medical profession, and is altogether likely ultimately, as a similar policy did long ago, to result in serious injury to the cause of Medical Education in this Province.

Yours, etc.,

WILLIAM T. HARRIS.

Jan. 24th, 1890.

OUR PHILADELPHIA LETTER.

(From Our Own Correspondent.)

THE USE OF PHOTOGRAPHY FOR RECOGNIZING AND COMPARING TYPES OF INSANITY.

Since the introduction of simple forms of photography, renewed efforts have been made by physicians and other scientific workers to adapt this art to practical use in medicine. The introduction of composite photography was an advance in proving the manner in which certain marked characteristics grow in different types of individuals. Instantaneous plates, cleverly arranged, have been made to show the curious gaits of different forms of nervous ailments. But photography as a whole, has been a rather disappointing agent in medicine; it has done but little of what is expected of it, and in many cases and attempts it has proved a misleading guide. At Norristown, in the State Hospital for the Insane, photography has been used to catch the lineaments of the various types of insanity; the method in which the work is done may be of interest to the readers of the LANCET.

A gallery convenient to the wards was fitted up and typical patients were selected from among the eight hundred insane men collected in the institution. The patients were brought to the gallery with as little previous knowledge of what was going to happen as possible; this was done to avoid exciting them or giving them time to "fix up;" every thing being wanted as near the reality as possible. They were given a chair and were allowed to assume their own positions; no instructions whatever as to position or posing, being given. Wherever the patient noticed this lack of instruction he attributed it to the amateurishness of his photagraphers. In this way many interesting characteristics were brought out; the moods in which they happened to be were expressed; the expression of the face was given; the general physique and costume of each class could be studied. All this went to make up the *tout ensemble* which gave to each patient an indescribable finish, different and yet adhering to a certain type. This effect was facilitated by the rapidity with which the pictures were taken. The camera was already focussed; the light arranged; no head-rest was adjusted, for the exposure was short; care being taken only that the chair in which the patient sat should not be moved.

By using the same chair always in the same position, with the same light and the camera invariably the same distance from the sitter, this could be done; it also served to show the comparative height and breadth of each patient in this way, the space between the top of the sitter's head and the upper edge of the photograph represents the varying heights and the amount of background revealed on each side shows the comparative breadths. In this way two hundred and fifty interesting photographs were obtained in a short time.

The method has been still further broadened by Dr. Chase, chief resident male physician, so that now all new patients are photographed on admission and the faces of all the older patients are gradually being added to the collection, so that the whole eight hundred are now included. This album serves a number of purposes; it shows the condition of the patient at a certain period; it serves as a reminder in recalling the cases of dead or discharged inmates, and in cases of escape it affords a very efficient means of identification. When Dr. Chase completes this work, it will throw light on a very interesting and important point; that is, to what degree the faces of the insane express their malady; whether it would be possible to diagnose or classify them by such means. Moreover it will add another interesting advance in medicine and photography to the annals which yearly fill our journals.

J. HOWE ADAMS, M.D.

TREATMENT OF VENEREAL WARTS.—P.S. (*Br. Med. Jour.*) writes: "Licentiate" will find the following powder, used twice daily and left on the wart, remove the growth in a few days; I have often used it; ℞ Pulv. sabinæ recent., cupri subacet., āā ʒj, M.ft. pulv. It is an old remedy, but very effectual. Salicylic acid also rapidly removes them when applied in powder.

ARSENICAL PASTE FOR WARTS.—It is said that ung. hyd. nit., containing from five to ten per cent. of arsenic, spread on linen and applied over the wart will cause softening and gradual disappearance of the growth without pain.

Selected Articles.

ON THE PATHOLOGY OF RENAL DROPSY.

By A. G. Auld, M.D.

The pathology of dropsy, and of renal dropsy in particular, has excited considerable interest and discussion since the experimental inquiry which is chiefly associated with the name of Cohnheim.

With respect to the œdema of hydræmia, Cohnheim, and with him Lichtheim, found in their experiments that a simple hydræmia or even hydræmic plethora was insufficient for its production. It was necessary that a change in the capillary wall of a paralytic nature be superadded, tending in all probability to cause a loosening of the attachments of the endothelial cells of which it is composed. In one experiment, Cohnheim and Lichtheim ligatured the iliac vein of a dog, yet this was not followed by œdema of the corresponding limb. Ranvier repeated the experiment, and in addition divided portions of the sciatic nerve. It was found that while section of the motor fibres of the nerve gave negative results, section of the vaso-motor fibres was followed by œdema of the limb. Salvioli obtained similar effects in dogs rendered artificially hydræmic. With respect also to the lymphatics, it is found that their complete occlusion is, at least for a time, unattended by œdema of the pertaining parts. In another experiment Cohnheim depleted a dog, and injected salt solution till hydræmic plethora ensued. The result was a great increase of the natural secretions—e.g., saliva, bile, urine, and intestinal fluid; but not until the hydræmic plethora was of the most extreme kind was any dropsy manifested, and then in the form of ascites only. Not only so, but Fleischer, after tying the ureters and adding urea to the injected liquid, failed to obtain anasarca, nor was the blood pressure permanently raised.

On the strength of these and such like experiments Cohnheim came to the conclusion that dropsy occurring in the human subject was caused not so much by a hydræmia or hydræmic plethora, as by a morbid alteration in the walls of the capillaries favorable to an increased transudation of their fluid contents. This alteration he considered to be due to the direct action of a particular poison existing in the blood, the nature of which is ·blematical, but defined by some in the case of al dropsy as the same specific agent which ects the kidney. It is, however, suggested by unton that it may be sarco-lactic acid, which, in ditions of imperfect oxygenation, may be ned instead of carbonic acid, he and Cash have overed that the addition of dilute acids to the d not only causes increased permeability of vessels, as observed by Gaskell, but also œdema of the surrounding tissues. In reference to this question, it may be said that, apart from inflammatory conditions, there is but scant evidence to maintain the proposition that the existence, and even the prolonged existence, of a poison in the blood has any direct influence in the production of dropsy. Were it so, this symptom would be much more frequent, and at the same time much less significant, than it really is. Quite an exceptional instance, however, is found in the case of arsenic, which causes an œdema of obscure origin said by Feitelber to be the outcome of defective oxygenation. It could hardly be justifiable to adduce the malignant œdema of Koch in this connection, which is due to the action of a bacillus, though Bienstock, indeed, states that a somewhat similar organism can be cultivated from the fæces of man. On the other hand, there can be no doubt whatever that there are poisonous substances which by reason of their deleterious action on the blood act as remote causes in the production of dropsy. This is well illustrated in the case of the œdema of chlorosis, there being every reason to believe that this cachexia is intimately related to the absorption of ptomaines and leucomaines from the stomach and intestinal tract, as declared both on pathological and clinical grounds by Bouchard, Duclos, Sir Andrew Clark, and others.

Again, with respect to the locality of the œdema it is found in disease, and especially in renal disease, that hydræmic plethora is chiefly associated with symptoms the very reverse of those occurring in Cohnheim's experiment—with œdema, namely, of the skin and superficial tissues of the body, and with a diminution of the natural secretions and excretions. Pathologists have been much troubled over this very decided though instructive contrast, for the explanation of which various opinions have been advanced. Cohnheim himself supposed the skin in renal disease to be in a morbid state, its vessels debilitated, and more susceptible to the action of the poisonous agent which he believed to exist—a condition which, indeed, demonstrably obtains in the case of scarlatinal dropsy. Coats, commenting on this, imagines that a special vulnerability of the skin, is, from its pathological relationship, to be apprehended in kidney disease, and he further considers it probable that it is injured by the same irritant which attacks the kidney. Hamilton, in his search for an explanation, goes almost the length of contradicting himself. He believes the œdema to be induced by a long-continued stretching of the skin, for the production of which there was not sufficient time in the experiments on dogs, and yet elsewhere he states truly that the superficial œdema commences where the tissues are very lax. The most striking negation of the theory that the œdema of the skin is owing to a special

participation of this texture in the disease is that afforded by the similarly distributed œdema which results from retention of urine, independently of any renal disease. This curious phenomenon has been particularly investigated and described by Trousseau. Its symptoms consist in an enormous distension of the bladder, with frequent or continuous dribbling of healthy urine and anasarca. Trousseau imagines that a flow of urine may take place backwards through the ureters into the kidneys distending these organs and impeding their functions. It has suggested itself to me that part of the urine may be absorbed by the distended bladder; but, anyhow, the fact remains that the anasarca is unattended by any disease of the kidney.

The very fact that the results of experiment on healthy animals bring into such bold relief the results of disease in the human subject suggests the greatest caution in dealing with them as standards of reference in pathological questions. Such ingenious theories as those referred to, which have been constructed to reconcile the dissimilar phenomena, are thus *a fortiori* liable to be impeached as tending only to obscure the light which these experiments convey. And such truly I believe to be in great measure the case. When critically examined, the chief value of these experiments seems to consist in their leading to the reflection that disease does not shoot out its phenomena in an hour or two, but that it works long and often silently, is recondite in its nature, complex in its affinities, and usually fertile in its resources; that is to say, they indicate that in the elucidation of the phenomena it is necessary to look deeper and more antecedent. And with respect to renal dropsy, I think there can be little doubt that its chief vital predisponent is that condition of the blood to which the term "anæmia" is conveniently applied. Clinical experience confirms this. "How is it," says Sutton, "that œdema is so prevalent in some cases and not in others? Frequently the renal symptoms — albuminuria, hæmaturia, giddiness and shortness of breath—have come on, but with no appreciable dropsy. The dropsy is augmented with the increasing loss of red corpuscles, the colored respiratory organs; and it may be plausibly suggested that to the anæmia of Bright's disease as to chlorosis certain retained products of the organism, or their costic derivatives, stand in a casual relationship. But, however originated, one of the most palpable facts in connexion with anæmia is failure of the blood adequately to carry on the circulation. Then, when to anæmia an hydræmic plethora is added, the conditions for the production of renal dropsy are fulfilled, whilst its distribution is regulated by physical laws. Consider the condition of matters. The blood, as already stated, is suffering intrinsically in progressive deterioration of its vital energy, particularly from progressive diminution of its corpuscles, which, by their mutual actions of the normal state, is, moreover, as Hamilton very appropriately insists on, signally impeded in its functions by alterations of its specific gravity. The plasma has become specifically lighter than the red corpuscles, which consequently cease to float with ease in the centre of the stream. Hereby the corpuscles, instead of assisting, only serve to retard the blood current, leading to increase of tension and the pressing out of a greater quantity of fluid than usual. But, further than this, the specific gravity of the blood as a whole, from the advancing attenuation of its proteid constituents, is altered relatively to that of the plasma in the surrounding lymph-canalicular system, which will constitute another condition favourable to the transudation of the fluid within the blood vessels, and such transudation will be rendered still greater by the loss of tonicity which the vessel wall shares in common with the rest of the tissues in this cachexia.

Now, in this hydræmic plethora, with its attendant difficulties of circulation, it is in accordance with dynamical principles that in those parts most remote from the heart—in the periphery of the body, namely — will the impediment be greatest; and, in accordance with the laws of gravitation, the most dependent and the most lax of these parts will be specially involved. There the *vis a front* is greatest and the circulation is slowest; the venules become over-distended, and are unable to absorb and transmit the lymph which pours forth excessively from the capillaries. Should this state of matters continue, the circulation will fail nearer to the heart, until the fluid accumulates internally, in the serous cavities, lungs, and other organs, when death is imminent.

On the other hand, with regard to the phenomena which appeared in the subject of Cohnheim's experiment, their explanation may not be so far to seek when it is considered that the blood and internal organs were vigorous and healthy to begin with. A continuous effort would naturally be made by the healthy organism to rid itself of the superabundant fluid by means of the natural channels. This would lead to venous engorgement in and around those organs whose functions were exalted. Such would notably take place in the abdomen where excretion has its seat, and hence the resultant ascites. But in disease these conditions are reversed, and the organism perforce seeks relief through other channels, for the excretory organs are appealed to in vain towards the riddance of a foreign element whose invasion they have been powerless to resist, and under whose yoke they are paralysed.—*Lancet.*

THE PRESENCE OF SUGAR IN THE URINE.

A few years ago I published in the *St. Thomas's Hospital Reports*, vol. xii., some notes on glycosuria, chiefly as observed in persons who had passed the middle age of life. The observations then recorded have been followed up and added to, and I now venture to set before you some statements and remarks in the way of supplement and illustration. These statements and remarks must not be taken to represent final decision in any one direction. They are, on the contrary, presented as matters to be thought about, matters which, being amplified by further note and thought, may help us to understand more of what indications in the way of diagnosis and treatment may be drawn from the occurrence, in one case or another, of glycosuria.

I trust that I shall not weary you if I review, in the outset, the conditions which may, so far as our knowledge goes, determine the presence of sugar in the urine in pathological quantity. Summarised as briefly as possible the conditions are: 1, excessive afflux of arterial blood to the liver, and probably to other glycogenic organs; 2, defective assimilation of glucose; 3, defective formation of glycogen; 4, instability of glucose; 3, defective formation of glycogen which is too easily transformed; 5, excessive ingestion of glucose or glucose-yielding substances.

Under the first head may be gathered several kinds of cause; for example, 1, vasomotor paralysis, determined by disease or injury of the medullary centre or of the nerves connecting the centre with the arteries of the liver; 2, dilatation of the hepatic artery, not determined by disease of nerve centre or nerves, but by irritation in the liver, or by reflex action at the instigation of other organs, such as the stomach, or by general disorder of the circulation, functional, a result of nerve strain or excitement, functional and probably also dyscrasic, as in gout; 3, possibly also compensatory hyperæmia, balancing obstruction of the arterial circulation in other parts and systems of the body. So far as I know, this possibility has not been hitherto discussed. But the converse of it appears to be pretty clearly established by actual experiment. Dr, Lauder Brunton, in the *Handbook for the Physiological Laboratory*, gives an admirable summary of the various ways in which nerve ;tions and nerve irritations may produce glyco- ıria. After showing that division of the fibres ssing from the vasomotor centre in the medulla longata down the cervical part of the spinal rd, and thence along the vertebral arteries to last cervical ganglion is followed by diabetes, states that it is of great importance to notice ıt section of the sympathetic cord or splanchnic ves does not produce diabetes, although the vasomotor nerves of the liver are thus divided. To quote Dr. Brunton textually: "The reason of this probably is that the vasomotor nerves of the intestine being divided at the same time, so much blood goes to the intestinal vessels that the circulation in the liver is not increased."

If this plausible explanation be admitted, it seems to me reasonable to argue that an undue contraction of arteries in other parts of the body than the liver may determine an excessive blood-pressure in the arteries of that organ, and to set up glycosuria, the liver itself not being necessarily at fault. There is one form of glycosuria to which I shall presently draw your attention as being possibly explained by such conditions.

The first practical point to which I should like to draw your attention is the influence of heredity in bringing about glycosuria. Of this my notes afford several instances. In one case both parents have passed sugar in the urine for many years; the father dying at the age of 75, the mother being still alive at an age over 80. Here the eldest son, a remarkably powerfully-built man of 55, has glycosuria. In another case the eldest daughter of a gentleman, who died also at the age of 75, after passing sugar for many years, has glycosuria to an amount justifiying the application of the term diabetes. She is a tall, very stout lady, enjoying apparently very good health, but she passes daily from 100 to 150 ounces of urine loaded with sugar. Again, a gentleman of extremely nervous temperament comes with intermittent glycosuria. His nervousness goes often so far as to annul self-control, so that he dare not travel about the streets of London without a companion; and his glycosuria appears mainly to coincide, in its development, with his perturbations. He states that his mother has diabetes, and is under restraint on account of mental aberration. My notes also give me two other cases of inheritance of a similar kind. They further present more than one case in which brothers, or brothers and sisters, of one family, have had glycosuria. In one of these it is probable that one of the parents had been a subject of the malady. It is of course evident that the existence of glycosuria in minor degrees will have been often overlooked in the past, and that a better estimation of the transmission of the tendency will, in the future, be more possible under the steady maintenance of careful examination of the urine. I think it is certain that in many cases the disease is transmitted from parent to child; and it is worth our while to consider in what way the transmission may be ordered.

In the first case to which I have drawn attention there was a transmission from the father's side of gout as well as of glycosuria. Glycosuria is well recognized as a not infrequent symptom of gout; and here it is to my mind very probable

that the gouty diathesis determined in each case the occurrence of the glycosuria.

Glycosuria, again, is certainly often observed in people subjected to great nervous strain, and in victims of excessive nervous irritability. Here, again, the possibility of a double transmission must be before us. But, when we come to consider cases in which these conditions are absent, a different view is presented.

Gout and nervous disorder being absent, both in parent and child, it is reasonable to suggest that tissue imperfection is to be invoked. In the second case which I have quoted, the lady who presents a sharp glycosuria is also abnormally stout. Her father, it may be noted, had at one period of his life been of very full habit.

The conjunction suggests that her tissues are, in more than one way, abnormal tissues; that, correlated with the excess of fat, there may be an imperfect constitution of glycogen, rendering it unstable and prone to change. In considering heredity observed in diabetes, we surely have not only to recognize the handing down of morbid processes, but also handing down of various constitutions and modes of behaviour of the several tissues.

The occurrence of glycosuria in very stout people is certainly a noteworthy fact. I have seen it in people stout by inheritance and without other sign of disease; in people stout by reason of unwise habits of life, sometimes in the way of want of exercise, notably in the way of alcoholic indulgence; and I am inclined to regard both the accumulation of fat and the occurrence of glycosuria as marks of imperfect forms of nutrition. In addition to these causes, we cannot overlook the influence of persistent alcoholic excitement of the liver in many cases included in the group just referred to. I find in my notes records of many cases in which, together with obesity, there were marked indications of affection of the liver. In most cases the liver was enlarged and tender; in a much smaller number, reduced. In most, with the alteration in the size of the liver, there coincided such symptoms as occasional jaundice, morning sickness, and great impairment of appetite. It is fair to suppose that in such cases the irritation of the liver by alcohol produced a reflex active hyperæmia, and consequently glycosuria, so that the relation of corpulence to glycosuria is decidedly complex. It is necessary, however, to remember that not a few of the victims of alcoholism come to us emaciated and still present glycosuria. I am much interested in finding that, in a very considerable proportion of cases of this class, valvular disease of the heart is detected, in addition to the affection of the liver. At first sight this, by causing backward pressure into the liver, would appear to oppose the introduction into that organ of an excessive amount of arterial blood. I am not prepared at the present moment to explain the part taken, if any, by the valvular disease in the favoring of glycosuria. But the concurrence comes out strongly in my records, and must demand further attention. I think it probable that irregularities of arterial tension will here have to be considered.

There is another group of cases which I think must be placed in close approximation with the foregoing. We not infrequently find that people presenting in a typical form the symptoms of contracting granular kidney have also glycosuria. Within the last few weeks I have seen a farmer, aged 60, who presented all the symptoms of contracting granular kidney of about a year's duration. He had no valvular disease; had a considerable enlargement of the liver, and, it is to be noted, much anasarca. His urine was of specific gravity 1022, contained a good deal of albumen, and gave a very definite sugar reaction. He had been a stout man, but was now much wasted, and had not been guilty of alcoholic excesses. He had no definite sign of gout. Now, whether in this case the glycosuria was due to a general defect of assimilative or constructive process, or related with a very definite arterial tension, is not easily to be decided. I put it forward as one of the many problems awaiting solution in the study of glycosuria. To these I will at the moment add another. I have observed the occurrence of glycosuria in two cases of Raynaud's disease, and with these I may couple the notes of a case which I had the opportunity of watching for several years. The patient was a gentleman of the age, when I first saw him, of 64. He was rather stout, had albuminuria and casts in the urine, and was passing a good deal of sugar without polyuria.

When I found these conditions I put him upon a careful diet, which, I am bound to say, he entirely disregarded. Shortly afterwards circular sloughs of very slight depth made their appearance on his legs, about equally on both. Their form made me suspect the influence of syphilis, but upon this point he was not communicative. The history of his children makes it pretty certain, however, that he had had syphilis severely. I treated him with iodide of potassium and kept him at rest for many weeks, with the result that the sloughs separated and the wounds healed. He now remained fairly well, though with diminished faculties, for six years, and then again consulted me for the reappearance of sloughs, now mainly confined to his left leg, in which I found, in addition to extensive sloughs still of a superficial character, a complete obstruction of the femoral artery, which certainly had not existed before. Placed in bed and carefully nursed, while the administration of iodide of potassium was steadily maintained, he survived for more than six months.

Renal disease, glycosuria, and syphilis seemed all to have played their part in the fatal termination, and to the end there was no such general sloughing as one would have expected to result, in such a damaged constitution, from the blocking of the femoral artery. Here is another illustration of the complexity of the symptoms which are found in many cases of glycosuria, or I may perhaps say of the complexity of the causes which may determine the occurrence of glycosuria.

I am here reminded of a case which I recorded many years ago, looking at it from a different standpoint from the present. A young man of 25, who had contracted syphilis, consulted me on account of mischief in the mastoid process. The mischief turned out to be of a very serious character. On examination of his urine I found that it contained both albumen and sugar in considerable quantities. The albumen was pretty clearly referred to contracting granular kidney, but the sugar was not so easily disposed of. The first idea in any way of explanation was that irritation had spread from the mastoid process, inward to the medulla, and had affected the glycosuric centre therein. The next idea was that the liver might be involved in the meshes of syphilis, and be consequently disordered in its glycogenic function.

I must confess that the case at the time engaged my attention chiefly in respect to the remarkable form of uric acid observed in the urine, which indeed led me to undertake a prolonged observation on the influence of the constituents of urine normal and abnormal upon the form of uric acid as observed under the microscope. Whatever may have been the cause of the glycosuria in the case to which I refer, it is evident from cases which I have since seen that glycosuria is often present in cases of tertiary syphilis, and under conditions not involving irritation of the medulla.

My notes supply me with several instances of the association of glycosuria with tertiary syphilis without the least suggestion of implication of the medulla. The well known incidence upon the liver of the effects of tertiary syphilis leads me to presume that hepatic irritation is mainly chargeable with the production of the symptom of glycosuria; and on review of my subsequent cases I find that signs of hepatic disorder were always present. But I dare not speak in any tone of ecision upon this point, being confronted by the rofound alterations in general nutrition brought bout by syphilis, and by the recognition of the ossibility that, independent of hepatic irritation, ulty tissue-building may have to be considered; d such defect of anabolism may not concern the er only. We know that there are other organs which glycogen is formed and stored, notably muscles. And as I review glycosuria as it has presented itself to me, I experience much doubt as to whether I have not been keeping the liver too pre-eminently in my mind. The comparatively small amount of sugar found in the urine of many persons fairly advanced in life may possibly be inadequate to the majesty of that great organ. I know of no methods of analysis which may enable us to distinguish a glycosuria of hepatic origin from one of muscular origin. I can see no reason which should prevent a glycosuria from being the result of perturbations in the several glycogen-forming structures respectively; that is to say, it seems to me quite possible that a disturbance of nutrition in muscles, in spinal cord, and in liver might exist independently in each and give rise to glycosuria, while, on the other hand, a deep dystrophy might affect all at once. You will see that the consideration is rather wide, and I think that it offers a problem worthy of careful analysis.—Wm. M. Ord, M.D., F.R.C.P., in *Brit. Med. Journal.*

(*To be continued.*)

DILATATION OF THE STOMACH.

Dilatation of the stomach is a pathological condition generally, if not probably always, accompanied by subacidity, and in a large number of cases with anacidity.

Only a minority of cases of this kind are primary dilatation—*i.e.*, that do not depend upon some other morbid affection of the stomach; the majority are secondary, in so far that they are consequent upon stenosis of the pylorus, which in turn may be either benign or malignant—the former arising from cicatrical contraction after ulcer, the latter due to the presence of carcinoma in that region. There may be also stenosis from mechanical pressure of near-lying tumors (floating kidney, Bartels), which, in turn, like all obstructions in that locality, occasion dilatation of the stomach.

Gastric dilatation without pyloric obstruction is sometimes noted in, and consequent upon, chronic catarrh of the stomach, but never occurs then in that degree as in the variety resulting from the former cause. It depends upon paresis of the muscular coat resulting from general debility or overdistention by ingested matter, and is frequently noted in those who indulge to excess in the pleasures of the table and the cup. I have had occasion to observe it more in connection with the chronic gastric catarrh of beer-drinkers than of any other class of patients, and it is also claimed to be frequently found among diabetics.

The *pathology* of gastric dilatation is to be considered as similar to that of cardiac dilatation in aortic obstruction. The muscular fibres of the

stomach, to overcome the pyloric constriction, first become hypertrophied; the accumulation of food soon produces paresis of the muscular coat and dilatation results, which increases in the same measure as the chemical peptic act is diminished, and the fermentative changes of the food-bolus produce irritation and inflammation of the mucosa. The latter, under such conditions, fails to secrete a sufficient amount of hydrochloric acid, which is the excitant to gastric peristalsis. As a consequence of overdistention, the mucous coat suffers anatomical changes, the ostia of the peptic glands —which at first appear almost hypertrophied and extend beyond the surface of the mucosa—soon atrophy, and with it the secreting power of the gland becomes less and less.

It was thought at one time that anacidity was pathognomonic of gastric carcinoma, but that has been certainly disproven, and it can only be possible when pyloric cancer, and consequent obstruction, produces dilatation of the stomach. Any considerable dilatation must necessarily result in subacidity, and if existing for some time and in increasing ratio, or from complete pyloric stenosis, it must result in anacidity. This has been disputed and HCl has been claimed as being present in not merely distended stomachs, but also in the overdistention or complete dilatation from pyloric obstruction, but it seems unlikely, and when we consider the diagnostic difficulties for defining distention, or even sometimes complete dilatation, the error may be readily looked for rather in the diagnosis than in the pathological condition. We may justly assume that anacidity is not a symptom accompanying any special gastric disease, but in all probability always results from complete dilatation from whatever cause this may happen. While in the functional anacidity from gastric catarrh, etc., this may exist for the time being and is, no doubt, also the result of dilatation, it being a paresis of the fibre as in complete dilatation, the chemical character of the gastric secretion can be restored by a removal of the vicious element.

The *symptoms* of gastric ectasis are those of apepsia generally, anorexia, gastric pressure, eructations, pyrosis and vomiting. The latter is somewhat characteristic, as it takes place at longer intervals only, when the ectasis has assumed great proportions and fermentative changes exert their irritation upon the mucous membrane. According to the amount and quality of food taken, it may happen only once in twenty-four hours, or in three to four days, and even longer periods. My friend, Dr. J. M. Barton, ingeniously ascertains the number of meals comprised in the emetic act under such conditions, by giving a number of raisins with each meal and counting their number when rejected from the stomach. To arrive at the degree of stenosis he gives both raisins and a few currants. If the latter are not ejected in the vomit he concludes very justly that the pylorus is partly pervious and deduces the amount of constriction from the size of the currants. The ejected matter is usually copious, is readily vomited without much nausea or straining, and patients feel a great sense of relief after it.

The *diagnosis* is not always as readily arrived at as might be judged from the number of mechanical means for this purpose. The objective examination by palpatation and percussion leads in well-marked cases at times easily to a satisfactory conclusion, especially if the stomach is filled by fluids or gases. To that end it is often of great service to give in different potions about thirty grains of sodium bi-carbonate and tartaric acid, when, as a rule, the inflated stomach may be palpated with facility. If, in addition to this, a quantity of water, about eight to twelve ounces, is swallowed and the line of dulness by percussion is located below the umbilicus, the diagnosis is pretty certain. Adhesions from perforating ulcer or carcinoma may, however, embarrass the result under such circumstances. Perhaps the most satisfactory method for obtaining the capacity of the dilated stomach in complete pyloric stenosis is to fill the stomach with water through the tube and to measure the fluid as siphoned out therefrom. In atonic dilatation or with perforating ulcer or carcinoma this, also, is valueless. The examination of the stomach for dilatation by means of sound does not possess the value claimed for it, as displacement of the viscus may simulate the pathological condition in question.

The general condition of the patient suffering from gastric ectasis is always more or less impaired; emaciation rapidly takes place; the bowels are obstinately constipated and will not be open for days and weeks; the urine is generally small in quantity and of neutral or alkaline reaction. The total absence of hydrochloric acid from the stomach in connection with the other symptoms above enumerated would certainly point very strongly toward an existing dilatation as probably arising from pyloric obstruction. Functional dilatation may be accompanied by subacidity, and in these cases the existence of dilatation together with the degree of ectasis can be arrived at satisfactorily only in a minority of the cases.

The *prognosis* of atonic or functional dilatation of the stomach may be viewed as favorable—*i. e.*, readily yielding to proper therapy. Gastric ectasis from cicatricial pyloric stenosis is more serious, but with proper management much can be done toward keeping up nutrition and preserving life. The recent operative treatment in this condition, as practised by Loreta in Italy, and Bull and Barton in this country, has been so success-

ful that a great future may be promised for it. The prognosis of dilatation from carcinomatous stenosis of the pylorus is most unfavorable, though pylorectomy has produced some favorable results.

The *treatment* for atonic gastric ectasis is one that depends largely on a proper diet. Albuminous substances, such as eggs, broths, or scraped meat, should be freely exhibited, followed by a dilute hydrochloric acid with strychnine or nux vomica. Carbohydrates should be prohibited, nor should milk or other beverages be taken in quantities; saline laxatives are best indicated to keep the bowels solvent; the faradic current applied to the epigastrium will prove of vast value; the catarrhal condition should receive attention as pointed out under that head.

In the graver or secondary dilatation the treatment must depend upon the removal of the accumulated food by means of the stomach tube and the daily repeated lavage. While the pyloric stenosis is not directly benefited by this, the hyperæmia and œdema accompanying it can be much relieved by this treatment. In a case now under my care in the German Hospital, complete stenosis no doubt existed; no alvine dejecta had passed for about two months, all of the food taken was vomited at intervals of from one to two days; the patient's weight from 156 pounds sank to 89 pounds, and corresponding debility was manifest. By frequent lavage and the administration of albuminoid food with HCl, and nutritive enemata of carbohydrates (glucose), the patient gained in strength and weight. At one time during the treatment he washed out through the tube an apple-seed, though he had not eaten apples for two months past. Alvine discharges soon became regular, and are now formed, while the patient's weight to-day is 129 pounds.

Though I do not regard the stenosis in this case as cured, the obstruction arising from congestion or œdema must have been certainly relieved to admit of good gastric digestion and the dilatation has undoubtedly been improved, as the gastric secretion is beginning to show traces of HCl, and the patient has appetite and digests food without medicinal aid.

That all of these cases should ultimately be treated in a surgical way, I fully believe, and when I consider the good result achieved by Dr. Barton in his recent case, patients should be encouraged to that end. Much, however, can be done medically to relieve the patient, and this should be exhausted or done preparatory to operative interference. It has been my habit in such cases to wash out the stomach daily with three to four pints of a dilute solution of borax, to give broths with eggs and scraped meat as nourishment, followed by HCl with nux vomica; and to administer enemata of from four to six ounces of glucose thinned with a little warm water and admixed with a-half to one ounce of beef peptones.

In the dilatation depending upon carcinomatous stricture of the pylorus, little is to be hoped from treatment of any kind other than intended to palliate the pain and relieve the most urgent symptoms.—*L. Wolff, M.D., in Medical News.*

ANATOMY AND EXAMINATIONS THEREIN.

The disposition recently shown by the Council the Royal College of Surgeons to accede to the proposal of the General Medical Council to increase the curriculum to five years is an event of importance. The time at present required is about four years, so that it will be necessary to determine how the additional year shall be utilized; it will be debated whether the whole should be given to medicine and surgery, or a part to the preliminary subjects. Whatever may be the solution of this question, there are certain directions in which the present scope and mode of conducting examinations in anatomy require to be modified.

We may, in the first place, recall one or two elementary truths which have a bearing upon the subject. We may assume that the object of this part of a student's curriculum is not to make an anatomist, but to afford a certain kind of training, and to teach a sufficiency for the practice of medicine and surgery. That which is taught and learnt is, we regret to say, determined, not by the teacher or student, but by the examiner and by the style of the examination. With regard to the first of these propositions, it may be further remarked that examiners who are specialists in a certain branch of knowledge are very prone to examine as if the student ought to know the whole of their particular speciality. Moreover, they seem to forget that different kinds of knowledge are of very different value. This is so much the case with anatomy that, whilst it would be exceedingly hard to tell of what value some facts could be to anyone but a specialist, it is very easy indeed to say that others are absolutely essential. We have before us a great many examination papers from a number of sources, and we find questions asked upon the metacarpal bones, the minute anatomy of the cerebellum, the relation of muscles the fibula, the particular ribs, and the like. Questions upon topographical anatomy are almost entirely absent.

Now whilst admitting that in learning all the grooves and excrescences upon a rib the faculties receive a training, we maintain that such things as the topography of the heart, liver, spleen, kidneys, brain and great organs generally, are infinitely more important. The last branch of knowledge is the working capital of a lifetime; the former the adornment for an examination, put off

hastily as soon as the ordeal is passed. As for the training which accrues from the study of minute anatomy, it can be obtained just as well in other directions. It is notorious that after the usual anatomical examinations have been passed, the topography of the body has still to be learnt, and learnt at a time when attention has to be given to other equally important subjects. The text books which are used in preparing for the various examinations are a commentary upon their nature. Some of them contain no allusion whatever to the topography of the structures of which they treat, and others merely mention it in a casual and unimpressive way. It will be said that in acquiring a knowledge of the sort of anatomy required by the present examinations manipulative dexterity is acquired. Without doubt it is; but would not the investigation of the muscles, vessels and nerves be sufficient for this without invoking the minute anatomy of the carpal bones? Next, whilst fully allowing the great importance of the acquisition of manipulative dexterity, we ask what steps are taken to ascertain that it has ever been acquired? At some of the university examinations the candidate is called upon to show his skill in dissection, but this trial is the exception rather than the rule.

So far we have been speaking of the ordinary qualifying examinations, but if we turn to the higher examinations we find the same state of things. It is the custom to speak of these as honours examinations, and therefore conclude that their style and scope are less open to criticism. But it is not to be forgotten that many of them are made a *sine quâ non* for appointments, and are therefore far from being purely honours examinations. However this may be, it seems strange that those who present themselves for the first examination for the Fellowship of the Royal College of Surgeons, and who it is assumed will ultimately be called upon to display considerable manipulative training, do not have their possession of such dexterity tested. In other respects these examinations seem admirably calculated to discover the candidate's knowledge of what is usually called "pure human anatomy." It is also the custom to introduce into some of these examinations questions bearing upon morphology and embryology. Anything which makes anatomy more scientific is to be applauded. But we note that those subjects are asked in rather an arbitrary way. At one time a question on the morphology of the ligaments of the spine is asked, or a question in embryology, and at another both those subjects are passed over in silence. This is obviously likely to lead to disappointments, and is a fault which could easily be remedied. Further, morphology and embryology make rapid advances, and knowledge seems often to be required which cannot be obtained from ordinary sources. It would be hard to say how far students should be sent to special monographs and papers, and perhaps it would be fairer if these particular branches of anatomy were scheduled. We cannot help thinking that the absence of this has something to do with the recent extraordinary number of rejections at the first fellowship examination of the Royal College of Surgeons. However, in this instance other factors are involved, and we have many complaints of the length of the papers, the shortness of the time given to them, and the extreme mental fatigue caused by having to write both papers on the same day, with only a short interval.

For the reason already given it is not enough to say that this is an honours examination, and may be taken or left; men who wish for the higher surgical appointments are compelled to present themselves for it, and would do so with greater confidence if it were improved in the direction which we have indicated. But it is with the pass examinations that we are mainly concerned, and here we think that a great deal more of topographical anatomy might well be introduced. This might be done, not by giving additional time, but by curtailing minutiæ which, to say the least, are of doubtful utility.—*Br. Med. Jour.*

MEDICAL NOTES.

Prof. Bartholow recommends for *habitual constipation* a few minims of wine of tobacco, taken at bedtime. It acts by increasing the secretion and causing peristaltic action.

If *stricture of the vagina* be discovered in a pregnant woman, let it alone, as the head of the child is the best dilator. Should it prove an obstruction, and not give way in labor, it can then be nicked.—Prof. Parvin.

Prof. Parvin thinks a solution of creoline for *washing out the bladder* should not be stronger than one-half of one per cent.; that is, half a teaspoonful of creoline to a pint of water. He prefers this strength for *vaginal injections* also.

For a man fifty-six years of age, Prof. DaCosta prescribed the following for *aortic stenosis* and *fatty degeneration of the heart*—

℞—Barii chlorid., ... gr. $\frac{1}{15}$.
Aquæ destillat., ... f ℥ j.—M.
Sig.—Ter die. Milk diet.

For a case of *subacute rheumatic fever*, Prof. DaCosta prescribed one ounce of potass. acetate in the first twenty-four hours, half-ounce the following twenty-four hours, and two drachms a day to be continued. Also ten drops of tincture of digitalis three times a day.

For *painful affections of large subcutaneous nerves*—

℞—Potassii cyanidi, ... ℈ j.
Aquæ, ... f ʒ j.—M.

Applied along course of nerve upon absorbent cotton. The skin must not be broken, or toxic symptoms will develop.—Prof. Bartholow.

For a case of *paralysis agitans* due to lead, the metal being found in the urine, Prof. DaCosta directed $\frac{1}{100}$ gr. hyoscyamine ter die, and—

℞—Kali iodidi, ... ℈ j.
Aquæ fontanæ,
Syrup zingiberis, . . . āā f ʒ ss.—M.
Sig.—Take t. d.

For a man suffering with *gastric ulcer*, brought before the clinic by Prof. DaCosta, the following was directed to be rigidly carried out: Absolute rest on the back in bed, milk diet, in which a small quantity of carbonate of soda is put, to render it alkaline; should this not sufficiently nourish him, then combine with the milk diet nutrient enema. For the anæmia accompanying the disease—

℞—Ferri et potassii tartrat., . . ʒ ij.
Glycerini, ... ʒ j.
Aquæ, ... q. s. ad. f ʒ iij.—M.
Sig.—Teaspoonful three times a day.

For a boy eighteen years old, having about ten *epileptic convulsions* a week, caused from a lesion in the cortical portion of the brain, Prof. DaCosta prescribed—

℞—Potassii iodidi,
Potassii bromidi,
Ammonii bromidi, . . . āā gr. x.
Tinct. belladonnæ, ... gtt. ij.
Syrup. zingiberis, ... f ʒ j.
Aquæ, ... f ʒ j.—M.
Sig.—Three times a day.

℞—Pearls of amyl nitrite to avert the convulsion, as he can tell for a short time before an attack comes on.

—*Coll. and Clin. Rec.*

USES OF BORACIC ACID.

Dr. Lebovicz, in the *Wiener Med. Presse*, narrates the following uses to which he has put boracic acid:—

I. Boracic acid acts antiseptically. Every soldier should carry one ounce of it in his overcoat pocket, and a handkerchief cut in two triangles for necessary bandages. Simply sprinkling a wound with finely powdered boracic acid suffices to insure rapid healing. This remedy being odorless and itself absorbing all odors, the author has used it advantageously in abscesses, ulcers of the feet, caries and necrosis of the bones, and in complicated fractures.

II. In anthrax and after the incision of furuncles it acts well when applied directly to the parts. Forming furuncles should be painted several times daily with the following—

℞—Boracic acid, } . . . āā equal parts.
Water, }

III. In burns, when the flesh is exposed, it is necessary to be careful with poisonous antiseptics. Boracic acid possesses the advantage of being non-poisonous. He covers the burnt surfaces with a boracic vaseline ointment in the proportion of one to five—

℞—Boracic acid (finely powd.), 20 parts.
Glycerine, ... 15 "
Mix, and add, vaseline, . 85 " —M.
Sig.—Apply twice daily.

In severe burns, with fever, the author combated the fever by the internal administration of the following—

℞—Boracic acid, ... 4 parts.
Glycerine, ... 10 "
Water, ... 100 "
Syrup of poppies, . . . 25 " —M.
Sig.—A teaspoonful every two hours.

IV. In skin diseases, such as pemphigus, eczema, rhagades, rupia, and scabies, the results obtained with boracic acid have been most favorable. The formula used was—

℞—Boracic acid (finely powd.), . 10 parts.
Glycerine, ... 20 "
Lanoline, ... 30 "

The treatment of scabies consists in first taking a warm bath and then rubbing the affected parts with boracic-vaseline salve (first one to two; later equal parts). The duration of this treatment averaged six days. In a case of granular conjunctivitis a cure was effected within forty-five days; a like result was obtained in some cases of pannus. Chronic scrofulous otitis is improved by lukewarm injections of concentrated boracic acid solutions; the application of boracic acid glycerine (one to ten) to stomatitis, aphthæ, or tonsillitis is followed by a curative effect.

V. For coryza—

℞—Boracic acid (finely powd.), } equal pts.—M.
Powdered coffee, }

Sig.—Use as a snuff.

Hospital Gazette.

It is stated (*Maryland Med. Jour.*) that the first medical degree ever given to an American woman was given forty years ago. To-day there are 2,600 women in this country having diplomas from either American or foreign schools.

THE TREATMENT OF IDIOPATHIC CROUP WITH TURPENTINE.

CASE I is that of a child, two years of age, in whom the diphtheritic process had extended into the trachea. So critical was her condition that the parents had reluctantly consented to tracheotomy being performed. Before having recourse to this last resort he determined to try Dr. Demelow's suggestion, and he gave the child a teaspoonful of rectified essence of turpentine. In about a quarter of an hour the stertorous respiration became quieter and calmer, and the little patient passed a quiet night, the aphonic cough having quite disappeared. The following day the child was practically convalescent.

CASE II was also that of a little girl, two and one-half years of age, who, when first seen was almost unable to breathe, all the extraordinary muscles of respiration being called into play. Tracheotomy was not practicable, and he therefore gave the same dose of essence of turpentine. The condition of the patient soon became relatively calm, although twenty minutes before the air only passed the larynx with the greatest difficulty. The cough which had been aphonic, became barking. The same evening, although the danger of asphyxia had disappeared, the symptoms of croup were present in all severity, but the parents refused to allow tracheotomy to be performed. Another dose of turpentine was therefore given, and on the following day the more urgent symptoms had disappeared, and all danger seemed to be passed. In two days the patient was quite well. In both these cases a cutaneous eruption followed the administration of the turpentine, but no trace of renal irritation could be perceived.

CASE III. On the seventh day of his illness, this patient, a boy, two years of age, was pale, livid, pulseless, and almost asphyxiated. Stenosis of the larynx was well marked. A dose of turpentine relieved the more pressing symptoms, and on following up the treatment the child gradually recovered, though noisy inspiration persisted for some time afterwards, attributed by the author to a thickening of the laryngeal tissues.

CASE IV. A boy, four years of age, suffering from diphtheria since eight days. This was one case of several, for there was an epidemic of croup at the time, six of which proved fatal. He found the same condition of quasi-asphyxia, with an aphonic cough and cyanosis. A spray of turpentine, eucalyptus, and carbolic acid in alcohol was ordered, and a teaspoonful of the essence given internally. The dose was immediately followed by a violent spasmodic attack of coughing, during which an abundance of false membranes and mucopurulent expectoration was got rid of. The shreds of membrane varied in length from one to three and one-half inches. The next day two other teaspoonfuls of the essence were given, one in the morning and one at night. Thereupon the child began to breathe more freely, took some nourishment and slept all night, except when awakened by the cough. On the second day one more dose was given without any apparent inconvenience. In four days the cure was complete.—*London Med. Rec.*

NERVE EXHAUSTION AND OPIUM.—The revelations following the death of Mr. Wilkie Collins may perhaps tend to increase the pernicious opium habit among those who are, or who believe themselves to be in need of some extra comfort or support. The accounts given by Mr. Edmund Yates, and by Mr. Hall Caine, differ insome respects, although they agree as to the relatively large amount of laudanum habitually taken by the deceased litterateur. The former speaks of Collins as a martyr to nerves and gout, and seems to infer that the drug was resorted to for the relief of pain. The latter, in an elaborate report of the conversation held early in 1888, professes to give the novelist's apologetic explanation for his practice. He took laudanum "to stimulate the brain and steady the nerves," and he had been in the habit of taking a wineglassful of laudanum many times a day for fully twenty years. Few things are more lamentable than the obvious cost at which much literary work has been accomplished. De Quincey, Coleridge, Bulwer Lytton and Wilkie Collins stand out as warnings against the folly of over-taxation of mental powers, and as examples of the habitual indulgence in opium. Rosetti, with chloral hydrate, and more recently the actor Damala, with morphine and cocaine, show the same form of weakness in resorting to other remedial (!) measures. It would be invidious to attempt to enumerate well-known names in literary and artistic circles of men whose work has been carried on beyond reasonable limits under the influence of alcohol. The lesson to be learnt is that brain power has its limitation as much as muscular power. Overwork produces exhaustion in both cases. Physiological laws cannot be set at defiance. So far as opium is concerned, it undoubtedly diminishes the susceptibility to external stimuli, and hence may enable a man whose attention is diverted by pain, to obtain relief, and perhaps to concentrate his thoughts more fully upon some particular point; but, as a mental "stimulant," its employment is to be deprecated as unsound and dangerous. The constant need engendered by its use does not strengthen the position of a "stimulant," so often erroneously claimed for this drug.—*Lancet.*

FORCIBLE FLEXION IN LOCOMOTOR ATAXY.—D. P. Bonuzzi has recently suggested forcible flexio

of the spine as a substitute for suspension in locomotor ataxy. From experiments made on the dead body he concludes that in suspension the relations of the spinal cord to the vertrebral column are somewhat altered, the former being displaced upwards to the extent of from three to four millimetres, while the vertrebral column is lengthened to the extent of from 1½ to three centimetres. This elongation however is more apparent than real, consisting as it does more in the separation of the spinous processes than of the bodies of the vertebræ. The roots of the nerve, though displaced to a certain extent, do not seem to be appreciably stretched, with the exception of the cauda equina, but there is an increase in the tension of the cerebro-spinal fluid. The body as a whole is lengthened during suspension to the extent of from two to three centimètres. Dr. Bonuzzi thinks the good effect of suspension depends on the traction which is thereby applied to the cauda equina, and through it to the whole spinal cord. He maintains that the same effects are produced in a more marked degree by forcible forward flexion of the body with the knees pressed up on the abdomen. By experiments on the dead body Dr. Bonuzzi claims to have proved that in this way a needle run into the spinal cord (the vertebral canal having first been laid open) was drawn downwards from a distance or from eight to twelve milimetres, the cord being at the same time made thinner and more resistant, and the cauda equina very tense. The apparent lengthening of the vertebral column was from six to four teen centimetres. When the body was forcibly bent forward there was a large out-flow of venous blood from the opening in the vertebral canal, showing, according to Dr. Bonuzzi, that there was great pressure on the venous plexuses of the cord.

The method has as yet been tried only once on the living subject. The patient was a woman who had suffered from ataxy for nine years, all the characteristic features of the disease being strongly marked. Flexion was kept up at first for half a minute, the length of time being gradually increased to three minutes. The sittings took place on alternate days, and the manœuvre was carried out two or three times on each occasion After three sittings there was marked improvement, and after eight the symptoms almost entirely disappeared. The woman could walk about and attend to her household duties; she was able to carry a ıil of water from room to room, a thing she had ·t been able to do for three years, and she could ınd with her eyes shut for half a minute without ling. Knee-jerk did not return but otherwise) improvement was progressive and permanent. e method has, at any rate, the method of simıity, as no apparatus is required beyond a towel sely twisted round the ankles, by which the er extremities are pulled up while the patient ·ing on his back.—*British Med. Jour.*

THE CURABILITY AND TREATMENT OF CIRRHOSIS OF THE LIVER.—Huchard *(Rev. Gén. de Clin. et de Thér.)* says that the belief is now general in the curability of many cases of hepatic cirrhosis under the employment of the iodides and a milk diet, but that there is a difference of opinion as to what forms of cirrhosis are curable. Marini has recently maintained that the classic cirrhosis of Laennec, the small, hard, and contracted liver, is not curable, and that only the hypertrophic form is amenable to treatment, and this only when treatment is commenced early. On the other hand, Lancereaux affirms that the ordinary alcoholic cirrhosis, the atrophic form, is almost always improved, if not cured, by the iodides and a milk diet; while the form attended by enlargement of the liver yields less easily to treatment, and that accompanied by icterus is still more obstinate.

The experience of Huchard is that atrophic cirrhosis is curable, especially in the early hypertrophic stage, while the form which is primarily and constantly hypertrophic, whether with or without icterus, is less easily influenced.

The treatment is complicated and ought to be carried out with precision. In the first place, iodide of potash or of soda, in doses of 8 to 15 or 30 grains daily, should be given from the beginning. In cases which extend over a long time, it is better to use the soda salt, as being more assimilable and less dangerous. Calomel may be given in conjunction with the iodides. It is best prescribed about every fifteen days, four powders, each of 3 grains. In this way the calomel acts not only as an alterative, but as a diuretic; and it is very important in this disease that diuretics be given. When thus administered the dangers of stomatitis are not so great.

As regards aspiration of the fluid in the abdomen, the author insists that most physicians do this too late, and that to remove a large quantity is actually to produce a serous hæmorrhage, by which the patient may be greatly, or even dangerously enfeebled. Every case of ascites should be aspirated early, and if the effusion be large, not all the fluid should be removed at one time. After the aspiration a purgative should be given and the employment of diuretics insisted on, since they act much more effectively after the ascites has been removed.

To influence the hepatic lesion revulsives are to be employed in the region of the liver—such as cupping, blisters, cauterization, etc. Hydrotherapy in the form of the Scotch douche in the hepatic region can also be used.

Of all treatment the milk diet is the most important. Two and a half or three quarts of unboiled or slightly warmed milk should be taken during the day in divided doses about two hours apart. Fifteen or twenty minutes should be occupied in swallowing in small mouthfuls a cup of

milk, in order to prevent the formation of a large curd in the stomach. If it produces constipation small doses of rhubarb, magnesia, or sulphur may be given. If, on the other hand, it causes diarrhœa, or is not well borne by the stomach, one-half tablespoonful of hot water may be added, or one-half tablespoonful of Vichy from one of the cold springs. If this does not correct the difficulty, powders of 3 grains each of pepsin, pancreatin, and bicarbonate of soda may be taken at times after a glass of milk. To make the milk acceptable to the patient in cases where there is a dislike to it, it may be flavored in various ways. Under the influence of this combined treatment improvement will, in favorable cases, begin to show itself within twenty or thirty days.—*Am. Jour. Med. Sci.*

DIGESTIBILITY OF BOILED MILK.—It is now very generally recognized, both by medical men and by the more highly educated section of the community, that it is a wise precaution to boil both water and milk before using them as beverages, and the practice is becoming very common. The growth of pathogenic organisms in these fluids, especially in milk, is often very rapid, and thus disease may be transmitted from one place to another. The temperature of boiling water puts an end to the life of the microbes, and also to the danger of infection. Another reason why boiled milk is so much used, especially in infant feeding, is that it is supposed to be more easily digestible than fresh milk. If, however, we can draw correct deductions from dogs to babies, it would now appear that this belief in the superior digestibility of boiled milk is founded on error. Dr. Randnitz, of Prague, has recently published, in Hoppe-Seyler's Zeitschrift für Physiologische Chemie, certain very striking experiments on this subject. He admits what anyone may confirm for himself, that milk that has been boiled does not, on cooling and the subsequent addition of rennet, form a large coherent clot as does fresh milk; but a flocculent precipitate of casein is produced instead. He shows, however, by analysis of the milk itself, and of the urine and fæces, that much less nitrogenous material is absorbed from milk that has been boiled than from the same milk when fresh. The digestibility of fat is apparently unaltered by boiling. The following figures, however, illustrate the fact just alluded to as to the difference of digestibility of the proteid materials: In three days, 15.6 grammes of nitrogen were given in the form of fresh milk; of this quantity, 13.3 per cent. was found in the fæces; the nitrogen of the urine accounted for 77.3 per cent., so that 9.4 per cent. was retained in store by the growing animal. The animal was next fed on boiled milk; and 10.4 grammes of nitrogen was given in that form in two days; 18.6 per cent. of this was found in the fæces, 75.7 in the urine; so that only 5.7 per cent. was assimilated. The belief in the superior digestibility of boiled milk is, however, so widespread, that we should like to hear of the confirmation of the above remarkable results before we recommend mothers to leave off what is, from other points of view, the very praiseworthy custom of boiling the milk they give to their children.—*Brit. Med. Jour.*

PULSATILLA IN DYSMENORRHŒA AND OVARALGIA.—Dr. Charles Bovet states, in *Les nouveaux Remedes*, November 9, 1889, that he has successfully employed anemone pulsatilla in diseases of the uterus. He differs from other authors who ascribe the greatest activity to the tincture prepared from the dried plant, and states that he has found the latter preparation by no means as active as the alcoholic extract, made from plants gathered fresh in June, and composed of equal parts by weight of the plant and of 90 per cent. alcohol. The glucoside obtained from the plant, and called anemonim, is less active than the extract. As regards the method of using the remedy: If the case is one of dysmenorrhœa, Bovet gives the patient, four days before the beginning of the expected period, four tablespoonfuls of a wine which contains about ten drops of the alcoholic extract of pulsatilla to the tablespoonful. As soon as menstruation begins the use of the drug is discontinued for three or four days and then resumed for three or four days in the dose employed at the beginning. Recovery from dysmenorrhœa is frequently observed after following this practice for two months. If chlorosis exists along with dysmenorrhœa, Bovet gives chloride of manganese also, in doses of five-sixths of a grain to the tablespoonful of the wine of pulsatilla. In cases of ovaralgia, as the result of chronic infarct of the uterus or inflammation of the neighboring structures, the pulsatilla wine is given continuously, in moderate doses, until the pain completely disappears. Bovet states that complications are never observed in the course of treatment.

As to the dose of anemonin; It was given in doses of from five-sixths of a grain to one and one-half grains a day, and never in a larger dose than three grains. It is decidedly more uncertain in its action than the alcholic extract, probably because changes in its constitution take place when it is kept a long time.—*Med. and Surgical Reporter.*

A NEW ADVANCE IN THE TREATMENT OF UNUNITED FRACTURE.—Every surgeon knows how difficult it is in certain cases to get a broken bone to heal by bony union. The ends may be pegged and hammered and sutured indefinitely without success. In the case of fracture of the radius there are often times special difficulties, since resection—the last resource of the surgeon—leaves a gap between the ends of the radius, which is

now shorter than the ulna beside it, and so it is almost impossible to bring the bared ends of the fractured parts into apposition and to keep them there. Even if a piece be cut out of the unfractured ulna, so that the inequality in the length of the two bones is removed, a satisfactorily result cannot always be obtained. In the *Lancet*, October 26, 1889, Professor McGill, after commenting upon the above facts and relating his failure with the last-mentioned procedure, explains a new method which he applied successfully in one case, taking the hint from a suggestion made by Dr. MacEwen, who proposed, in case of destruction of the shaft of the humerus by acute necrosis, that a new shaft should be secured by transplantation of bits of new bone.

In Professor McGill's case a man, twenty years of age, had fractured both bones so that the ends of the radius protruded through the wound on the radial side of the forearm. The ulna healed quickly and well, but the radius remained ununited, although the ends had been refreshed and wired three months after the accident. Some eight months afterward he came to the hospital. He had a scar over the wound, and the ends of the radius were quite movable, the usefulness of the forearm and hand being much impaired. An Esmarch's bandage was applied and an incision was made in the line of the old scar. The ends of the bone showed no signs of union, but were rounded and covered by a thick membrane-like periosteum. When this had been filed away, an interval of three-quarters of an inch was left between the fragments. This interval was filled with thirteen pieces of bone, each about one sixth of an inch in length, chiselled from the femur of a freshly killed rabbit. The bones were not wired. The skin-wound was tightly stitched, without drainage, with catgut. Firm pressure was applied by means of salicylated wool and bandages, and the forearm was placed on an anterior splint. There was no suppuration and very little discharge. The patient left the hospital in six weeks, with the bone firmly united. Three months later the injured arm was as useful as the other. Is it not possible that this method used by Professor McGill may be of service in the treatment of old ununited fractures in other parts? It is possible that a more vigorous action might be set up, by presence of the implanted healthy bone, than would naturally occur in the fragments of a fractured long-bone in a person of feeble constitution.

THERMO PALPATION.—It has been known for some time that there is a difference in the surface temperature of the body corresponding to the organs underneath—that is to say, the temperature is higher over the lungs than over the liver or the heart. From a communication published in the *Gyógyászat*, one of the chief medical journals in Hungary, by Herr Jonas and Dr. Benczur, it appears that this fact is available as a basis for a novel method of physical examination which may be styled "thermo-palpation." These observers say that it does not require any peculiar sensitiveness of touch or any special education to appreciate the difference of temperature on passing the fingers over the surface of the body from the situation of the lungs to that of the liver, and that patients themselves, and students who had not yet learned percussion, were quite able accurately to detect the height of a pleuritic effusion by the difference of temperature. Diseased and healthy organs can be mapped out in this way by going over the surface, first, say, downward and then upward, when the line of demarcation will be distinctly felt. The general principle appears to be that organs containing air, such as the lungs and intestines, permit of greater surface warmth over them than more solid organs, such as the heart, liver, spleen, etc. Of course, instead of using the fingers, a differential thermometer may be employed, and much slighter differences may be recognized than is possible by the touch alone.—*The Lancet.*

LOCAL TREATMENT OF CHRONIC ENDOMETRITIS.—M. Pollailon has just laid before the Académie de Médicine a suggestion as to treatment of chronic endometritis by cloride of zinc pencils. A cardinal point, the learned member contends, is the finding the proper dimensions to give to the substance, not so much as regards its length as its thickness, which should not exceed a quarter of an inch in any case. The action of the chloride of zinc is rapid, and from the fourth to the twelfth day the eschar comes away, and the *suites* of the operation are always very favorable. The pain is slight, and no febrile reaction is observed. To avoid any complication, the patients are ordered to keep to their bed three days, and lie on the sofa five or six days, or until the slough becomes detached. At the end of three weeks, a complete cure is generally obtained. Out of 40 cases, those treated by M. Pollailon, 38 were cured. The menses are not interfered with by the caustic. As to the indications and counter-indications, all chronic endometritis, with purulent secretions, all infectious or hæmorrhagic endometritis, and even all uterine hæmorrhages, except those provoked by confinements or large tumors, are benefited by this treatment. However, in the case of young women, this cauterization should be used with care. It was said that it caused sterility, but every woman affected with chronic endometritis is sterile, and remains so unless treated. Acute metritis and ovaritis would be counter-indications to the employment of chloride of zinc.—*Med. Press and Circular.*

ANTIPYRIN HABIT.—To the already long list of

drugs, the use of which, under proper restrictions, is both beneficial and proper in combating the various ills to which flesh is heir, but whose abuse becomes a curse to humanity, another has recently been added. Scarcely have we learned to properly use antipyrin than the tocsin of alarm must be sounded against its abuse. The recent discovery of its value as a nerve-tonic places it on the list with morphine, chloral, cocaine, etc., so seductive is its gentle, soothing influence upon the overstrained nerves. Its victims are already found, especially among society women, whose nerves, strung up to a high pitch by the overwhelming demands of a winter season of gayety, seize eagerly upon anything that will afford relief from the headaches and other disorders arising from prolonged fatigue and over-tired nerves. So pleasing is the effect that it is soon used for every trifling ill feeling, until the patient finds herself unable to live without it, and the fascinating "antipyrin-habit" is formed. Properly used as a nerve-tonic its effects are admirable, but *abused*, the victim becomes even more hopelessly entangled than the morphine or cocaine victim. The effects vary with the dose. In large doses it produces complete relaxation with loss of reflex action. In moderate doses, continued, it induces convulsions. As a stimulant its effect is much like that of quinine.—*International Dental Journal.*

The Pupil as a Guide in the Administration of Chloroform.—As a result of experiments upon animals and of observations made upon man, Dr. H. I. Neilson formulates the following conclusions: 1. The first effect of chloroform narcosis on the pupils consists in a dilatation which varies in intensity and duration in different individuals. As the anæsthesia becomes more profound the pupils then begin to contract, and finally become very small and immovable. If now the chloroform is pushed still further, a sudden dilatation occurs, which is the result of asphyxia, from which the patient seldom recovers; 2. As long as the pupil is observed to dilate in response to sensory stimuli, such as pinching the skin, the anæsthesia is not yet sufficient to allow the commencement of the operation; 3. As soon as the pupil becomes strongly contracted and immovable the administration of the anæsthetic must be suspended until a commencing dilatation is observed, and the patient must be held at just this point as long as the operation continues; 4. Vomiting causes a dilatation similar to that occurring as the patient emerges from the narcotic condition, but it is usually more sudden in the former case. In experiments upon dogs it was found that the contraction of the pupils did not begin until the blood-pressure was somewhat reduced, and that the dilatation proceeded *pari passu* with the increase in the blood-pressure. The author regards the appearance of the pupil as a very reliable guide for the administration of chloroform, as by it he is enabled to judge accurately concerning the condition of the patient.—*La Riforma Medica.*—*Brooklyn Med. Jour.*

Washing out the Bladder Without a Catheter in Cases of Painful Cysts by Means of Simple Atmospheric Pressure.—M. Lauvaux, *London Med. Rec.* A reservoir containing the fluid is placed three or four feet above the recumbent patient; a rubber tube with a perforated nozzle syphons the liquid into the orifice of the urethra. The liquid fills the urethra and then passes easily into the bladder. As soon as there is a desire to micturate the nozzle is withdrawn, and the stream passes out naturally. The injection is repeated as may be judged necessary—usually four or five times. Solutions of cocaine and boric acid are chiefly used. "For washing out the urethra an elastic catheter, with the ends bulbous and the openings allowing of a reversed current, was used, so as to obtain a constant irrigation by antiseptic solutions several times in the day." A number of cases of painful cystitis are detailed, and the conclusions are that the method has many advantages, and that the anæsthetic action of cocaine is a great assistance toward cure. Where there is much loss of substance in the urethra, difficulties arise, but the method of injection helps to discover and locate fistulæ.

Anæsthesia of the mucous membrane of the bladder can be produced in a few minutes with the cocaine solution, and then the use of aseptic injections will cure cases of cystitis rapidly.—*Annals of Surgery.*

Irrigation of the Puerperal Uterus.—Discussing in the *American Journal of Obstetrics* the question of irrigation of the uterus, Dr. Haynes lays down the following rules:—1. Where intra-uterine irrigation is used in the absence of sepsis, use no sublimate, but plain hot water, or salt and water. 2. If the urine is albuminous and scanty, use no mercury. 3. If the urine is slightly albuminous and copious, or if the patient is profoundly anæmic, do not use more than a pint of a solution of 1 : 8,000. 4. Always use tartaric acid and sublimate tablets or powders; dissolve thoroughly in a small quantity of water and mix carefully with a definite quantity of hot water in a pitcher, from which pour into the irrigator. 5. Always use fountain syringe, and for the uterus a double tube, so as to insure the return of the solution. If for any reason the fluid fails to run out as fast as it flows in (if not through the reflex tube, by way of its channels at its sides), shut off the flow. The irrigator should not be raised more than three feet. 6. Precede by copious irrigation with hot water to wash out blood, etc., which may form with sublimate adhesive albuminous compounds,

which may in time be absorbed. Follow by a quart or two of hot water to insure the evacuation of all the sublimate solution. 7. For the uterus use a solution not stronger than 1 : 8,000, and not more than a quart daily. 8. For the vagina use a solution not stronger than 1 : 4,000, and not more than a quart twice daily. Irrigation used in the above way is, he believes, a practice almost devoid of danger, but it is always a procedure requiring great care and judgment, and some skill.

Iodoform Gauze in Post-Partum Hæmorrhage.—Dr. O. Piering, assistant in Prof. Schauta's obstetric clinic in Prague, has published his experience in the employment of Dührssen's plan of plugging the uterus with iodoform gauze for post-partum hæmorrhage due to an atonic condition of the organ. Dührssen recommends that, when post-partum hæmorrhage comes on, the bladder should be emptied, and forcible friction and intra-uterine irrigation of hot or cold water, along with ergotin hypodermic injections employed; that if the hæmorrhage still continues, the cavity of the uterus should be filled with iodoform gauze, the irritation produced by this setting up active and permanent contraction. The method has, according to Dührssen, the advantages of great certainty, complete harmlessness, and facility in its performance. Olshausen, Veit, and Tehling, however, say that the contraction set up is not always permanent, and that the method is not so free from danger as Duhrssen believes. In consequence of these conflicting views, Dr. Piering resolved to give the method a trial, and he details several cases in which he employed it with complete success. In no case was any harm done by it. He advises that resort to the plug should not be too long delayed, and he prophesies an important future for the plug of iodoform gauze in post-partum hæmorrhage.—*Lancet.*

Acetate of Lead in Pneumonia.—Prof. Crocq, of Brussels, has found that a remedy which was formerly a good deal employed in pneumonia, but which has long fallen into complete disuse—viz., acetate of lead—is in many cases of great value. This remedy was prescribed, combined with opium, by Ritscher, and afterwards by Strecht, Leudet and others. Nothnagel and Rossbach mention it in their handbook, but consider that it is useless ordinary cases, though they recommend it where re is œdema of the lung, and in the hæmorrhaform of the disease. Prof. Crocq, having prebed the lead salt in a large number of cases, is vinced that it frequently reduces the heart 's as much as ten or fifteen per minute in a le day, and that exerts an equally marked effect n the temperature, the sputum, too, becoming in quantity, and less deeply tinged. Instead of producing constipation, it is far more likely to open the bowels; but notwithstanding this action there is no objection to prescribing it with a little opium in cases where diarrhœa is present, or, if preferred, trisnitrate of bismuth may be added instead of opium. Small doses are of very little use, the minimum quantity that should be ordered for an adult per diem being six grains, and this may sometimes be increased with advantage to as much as fifteen grains. This treatment may be continued for a fortnight without any symptoms of lead poisoning presenting themselves. Prof. Crocq remarks that it may be given at all stages of the disease, but at the beginning in strong subjects, and when the pain is severe, its action is but slight, and so antimonials are to be preferred at that time. Where, however, resolution is delayed, where there is but little fever, where the patient is very weak, where there is enteritis or diarrhœa, and especially where the digestive organs will not tolerate antimony, acetate of lead is very valuable. Again, when the pneumonia is secondary to some other serious disease, and when the heart is acting insufficiently so that the pulmonary circulation is interfered with as in Bright's disease, in organic affections of the heart, in drunkards and in old people acetate of lead will sometimes work wonders; indeed, he considers that it is most valuable in serious cases. Of course, it must sometimes be combined with alcohol.—*Lancet.*

Treatment of Gastric Ulcer.—In a recent clinical lecture on gastric ulcer, Dr. Byrom Bramwell, in speaking of the treatment of gastric ulcer, insisted upon the importance of giving the patient as much food as is necessary for the purpose of nutrition, and the avoidance of all foods which irritate the inflamed and ulcerated stomach, and which produce pain or vomiting. Liquid food, and especially milk, fill these requirements, though the latter is sometimes not well borne, unless boiled or partially predigested with pancreatin. Half a teaspoonful, or a teaspoonful, of the liquor pepticus given immediately after a meal, is often useful in those cases in which it is not considered necessary to peptonize the food before introducing it into the stomach. In the severe cases in which peptionized foods disagree, the stomach should, for a time, be placed at absolute rest, and the patient fed *per rectum.* It is now well-known that it is possible to support patients for long periods of time by means of nutrient enamata (milk beef-tea, defibrinized ox blood) and nutrient suppositories. Nutrient enamata should be given in small quantities at a time, to ensure their retention, and when the rectum become irritable, a few drops of laudanum should be added to every third or fourth enema. Potatoes, raw apples, meat and pastry are especially injurious, Tea is also bad.

The second indication is to administer remedies which will promote the healing of the ulcer. In ulcer of the stomach, as in every other disease, one of the great principles which should regulate our treatment is to remove the cause of the condition. Ulceration of the stomach is very frequently seen in chlorosis, and in such cases he has found arsenic in the form of Fowler's solution, with a teasponful of liquor pepticus (Benger's), a most valuable remedy. Bismuth and nitrate of silver are also very useful in treatment of many cases of ulcer of the stomach. In others, where the pain after taking food is very severe, a small dose of opium or morphia, given in the form of a pill, is of advantage. In cases where there is distinct tenderness on pressure, the application of a blister is often beneficial.

In treating ulcer of the stomach, it is necessary to attend to the condition of the bowels. Cascara, or castor oil, may be given when medicine is required; strong purgatives should be avoided.—*Studies in Clinical Medicine.*

ICHTHYOSIS IN AN INFANT.—Dr. Rona *(Archiv. f. Dermat. u. Syph.)* describes an interesting case in which ichthyosis developed in an infant a few days after birth. The disease appeared in discrete reddish spots, which after a few weeks became larger, and then the epidermis began to exfoliate. By the end of the second month the disease had so far advanced that the whole skin had a shining appearance, with constant desquamation. Rhagades developed in the skin, the lips became like parchment, and there finally developed swellings in the skin, which discharged pus. The child died in the fourth month. Rona considers that the disease developed simultaneously in the papillary layer and in the epidermis, and it was only after some time that the hyperæmia and infiltration of the affected parts of the skin became less evident. A second child of the same parents was seen by Dr. Rona when she was eleven years old, and in her the disease is stated to have been developed in the third month. The description of this patient shows the disease to have been present in a highly developed form. In the eighteenth month of this child's life the effect of the disease had been to prevent development and seriously to impair the health.—*Br. Med. Jour.*

SPURIOUS PREGNANCY AND LABOR.—Dr. Metzlar, of Leyden, has recently described, in a Dutch journal of obstetrics, an interesting case of this remarkable morbid condition. A woman, aged 41, applied, on July 1st, 1888, at a Leyden hospital for attendance at her next labor, due she stated in September. Dr. Metzlar was called in on Oct. 27th, the patient declaring that labor pains had set in. Thus, as has been observed in other cases, the delusion continued after the normal term, according to the woman's own reckoning, had passed. The abdomen was much distended and universally tympanitic and no tumor nor enlarged uterus could be felt. Then it was found that the catamenia had never ceased throughout the course of the suspected pregnancy. The abdominal walls and the breasts had recently enlarged through fat. There was very marked lordosis. Under anæsthesia the arching forwards of the lumbar spine and the abdominal distension disappeared. As the patient recovered consciousness the lordosis slowly returned. Dr. Metzlar also noticed that the patient made very deep inspirations followed by very shallow expirations, and the abdomen steadily distended. Neither laxatives nor hypnotism had any effect in diminishing the size of the phantom tumor.—*Br. Med. Jour.*

WARNER'S ANTISEPTIC PASTILLES.—Following a suggestion recently made by Dr. C. Seiler in the *Med. Record*, Messrs. William R. Warner & Co., the well-known pill and compressed pastille manufacturers, of Philadelphia, are now placing on the market antiseptic pastilles for the treatment of certain nasal affections. These pastilles are not only powerfully antiseptic and comparatively innocuous, but also distinctly deodorant, as sodium bicarbonate, sodium biborate, sodium benzoate, sodium salicylate, menthol, and oil of wintergreen enter into their composition. One of the pastilles makes 2 oz. of a lotion or spray for the nostrils, and it is, according to Dr. Seiler, "sufficiently alkaline to dissolve the thickened secretion adhering to the nasal mucuous membrane, and as it is of proper density, it is bland and unirritating, leaving a pleasant feeling in the nose. As an antiseptic and deodoriser it is far superior to Dobell's solution or any other non-irritating deodoriser and antiseptic."—*The Chemist and Druggist.*

VIRGIL MCDAVITT, M.D., Quincy, Ill., says: "I usually find Celerina to be a very agreeable and acceptable nerve tonic, quieting and calming nervous irritability and causing sleep oftentimes after spells of continued wakefulness, adapted to use in much the same cases as valerian, assafœtida, etc., not a cure at all, but a valuable addition to our armamentarium in the treatment of a class of cases which are often most vexatious and trying to the physician and worrying to the patient. In these cases I have often prescribed it alone or combined with other remedies with much success."

PROGRESS OF CREMATION.—There are now thirty nine crematories in various parts of the world Italy has twenty-three, America has ten, whil England, Germany, France, Switzerland, Denmar and Sweden have one apiece. Since 1876 th crematories in Italy have been 1,177, and tl total elsewhere only 1,269.—*Med. Rev.*

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MEDICAL EDUCATION.

Within the last twenty years the progress in the arts and sciences has been very great and it may be well sometimes to consider how this progress has affected and is going to affect the science and art of medicine. Twenty years ago, the chief object of the medical student was to secure a good apprenticeship, his desire was to place himself with the physician of large practice, who would afford him a good opportunity of becoming familiar with disease and the simple and ready ways of relieving pain and suffering; the trained nurse was seldom seen. The physician then had to know how to arrange his patient with the object of affording the greatest relief; he was the instructor of the attendants, his directions carefully noted, and carried out with the fullest confidence.

In the progress of a difficult and serious case and in more simple ones, the doctor was aided by the visits and reports of his assistant or student, made in the intervals of the regular visits. The student then, if we are to believe what is said by some of this present time, knew nothing of medicine; the e volumes of chemistry over which the student to-day pores, were then unwritten, he would e been puzzled to write the chemical equation resenting the formation of P. from bone ash, or give the formulæ and affinities of the class maines; his knowledge of physiology was lim- to that of the functions of the human body— w thoroughly and well the characters of the human heart's beat, but he did not know of the wonderful differences existing in the heart of the turtle nor of the growing and numerous capillaries constantly supplying the numerous glands in the tail of the salamander; but he knew something; his knowledge of practical diagnosis would put that of many a clinical teacher of the present day to shame: the neatness and carefulness with which he would apply a bandage or adjust a splint, proved he was not entirely devoid of artistic taste; he compounded his own medicines and often from the differences in the age and quality of a drug correctly explained the variation in its action in different cases. Things have changed since the day when these old fogies gave their practical lessons to their assistants, medicine has become a refined and scientific profession. The demands of science have in many instances thrust from the field those of practice, the matriculation has been raised, and is to be still further raised, until the matriculant has had several other professional courses before he can reach that of medicine, thus insuring and ingraining in the mind at its very commencement, an innate love of science; his anatomy is to be more comparative and less of human, his physiology is to be biology, and the more it is surrounded by machinery the better; it must be scientific, to follow his course of to-day; he must be a thorough and practical electrician; his knowledge of physics be of the most perfect kind; he must be a practical photographer, a chemist and a glass-blower, a naturalist and a zoologist, a good general mechanic, understand thoroughly the construction and repairing of clocks, and a thorough optician. If his time should be too much occupied to apply his science to man, what of that, he can do that when he gets into practice. In his chemistry he must know how to assay, to test for the metals qualitatively and quantitatively; he must analyse solutions of arsenic, and determine to a fraction of a grain the quantity contained therein; he must manufacture gases, determine the laws of their expansion, by experiment, and *perhaps* take up urinalysis.

When he comes in *advancing years* to the undignified drudgery and study of real practice, he will be thrilled by able clinical lectures, he may see the bedside of a patient twice a week, he may in his whole course of education have to *report* the histories of *six* medical and *six* surgical cases.

He may have to produce certificates of having during his lifetime *been present* (properly aseptized and at a distance) at six accouchments. That in his surgical practice he has ever tied a ligature or passed a catheter it is quite open to question; as to his ever having seen a case of smallpox, scarlet fever or measles, why the suggestion of such a thing would call forth vengeance from any live and active board of health.

We do not desire to continue the picture; we are not sneering at, or belittling the practical, the marvellous, the applied discoveries and benefits of science. We only ask those anxious to thrust into the medical course every newly discovered science or scientific apparatus, Is it necessary? Is it not possible to appropriate and apply results? Is there a the danger of controverting the medical course into a science course? In this age of clamorers for "practical courses," may not the medical students of the present become rather practical scientists than practical physicians? Can the student, in four brief sessions of six months and one summer of three months—in twenty-seven months—master the course? Canada is yet a young country, the best of her medical men have been those who, dependent upon their own efforts, by inherent energy and an application worthy of a people's homage, have so familiarised themselves with the science and practice of medicine, that to-day they are justly regarded as abreast of any in the world. If the course were extended to six, seven or eight years, the difficulty might in a measure be obviated but it would be living greatly beyond our means, and in the end result in injury to both the profession and the people.

When it is demanded of a student to qualify for the profession of medicine in such a superior manner by a prolonged course of mental and practical training, he is naturally led to expect a return in a measure corresponding to his outlay of time and money. We admit knowledge is in itself a never-failing source of pleasure; but it is unfair when a physician possessing a complete knowledge of science, literature and art, fails because of the unpractical nature of his *medical* knowledge, and one competing side by side with him succeeds, with a far less extensive education, whose habits may incline to that freedom of manner which enables him to be a companion to the village blacksmith and a croney of the keeper of the general store, who, more in sympathy with his surroundings, gains a popularity in his section of the country which the former cannot, for obvious reasons, bring his mind to compete for.

Let us not forget that the object of the physician's care is man, and every opportunity afforded the student to familiarise himself with his condition in both health and disease should be insisted upon by those who have the responsibility of framing the medical curriculum.

CARCINOMA.

The question of the possibility of changing a benign neoplasm to a malignant tumor by meddlesome interference is up for discussion. This time the subject is started by the laryngologists, some of whom are convinced that simple laryngeal papilloma may be rendered malignant by rude and frequent attempts at removal. If we remember, this was one of the dangers which Mackenzie feared early in the treatment of the case of the late Emperor of Germany, and although at the time the idea was ridiculed, still the fact that the matter is discussed is an evidence that some influential surgeons are in accord with him. At any rate, right or wrong, it is an important point to settle, and should not be disposed of until we are persuaded in one way or the other. It is a little unfortunate, perhaps, that the laryngologists are the most exercised, because they are inclined to base their opinions upon the appearance and behaviour of disease in the larynx, which of all the organs of the body would be most liable to present such transformation, if the thing were possible. A laryngeal papilloma either sessile or pedunculated may be, as everyone knows, malignant or benign, and perhaps mixed. The body of the tumor may be a simple hyperplasia of connective submucous tissue, infiltrated with inflammatory products and leucocytes which, under the microscope, may show no evidence of cancer, but this apparently innocent growth may spring from a decidedly cancerous base. Therefore, it is impossible for any pathologist to determine from an examination of a piece cut off such a tumor its nature unless by chance the instruments have gone deeper than usual. An epithelioma is often the immediate result of irritation and may undoubtedly

arise at the base of a simple papilloma of the skin. A small tumor on the skin of the face, of years' standing is benign, but if the individual pick at it, as he will often do from habit, he can through mechanical irritation start a malignant growth. Apart from the scientific aspect of the question then, it would be best to remove all such growths, tumors or warts, whenever they become a plaything for a person over middle life.

Given a simple papilloma on a vocal cord, at every breath it is moved on its base; its presence excites cough; consequently it is continually disturbed, irritated, inflamed and perhaps eroded; such continued irritation can induce a dangerous ingrowing of the epithelium at its base, and the starting of a malignant tumor. Admitting the possibility of such an occurrence it is easy to appreciate the reason of the present discussion, and still side with the majority, that the simple transformation of a benign neoplasm to a malignant tumor is improbable. When such apparent transformation takes place within the larnyx, it is probable that it was cancer in the beginning or that its presence has excited the growth of an epithelioma in its immediate neighborhood. These probabilities are of importance in the treatment. The moment a tumor is discovered on a vocal cord it must be removed and its base destroyed if possible. The multiple attempts to burn away such a growth are dangerous in more than one respect. Unless the tumor is destroyed at one or two sittings the cautery simply stimulates it to renewed growth, broadens its base and renders it more difficult to remove by cutting instruments. Tumors of the larnyx in middle life are dangerous; in the majority of cases they are malignant and demand the most formidable operations. Benign growths because of their locality are dangerous also, and should be removed at all hazards; the sooner the better

TREATMENT OF BUBOES BY INJECTION OF IODOFORM IN VASELINE.

It was the late Professor Ricord, if we remember correctly, who said that he expected to find a punishment in the next world, if he were so happy as to go down instead of up, in having numbers of patients around him clamoring for the cure of their gleet. Everyone who has had any experience in treating venereal diseases can sympathize with him, in the weariness of curing that condition, and will feel that he might have extended his remarks by including the healing of buboes. To a nervous, worrying patient, an open bubo is a thing of horror, and soon becomes the same to the medical attendant. The following from the *Journal of Cutaneous and Genito-Urinary Diseases* will be refreshing to all who have much bubo practice:

The following is the manner in which Prof. Pontain proceeds: 1. Washing and antisepsis of the region by means of Van Swieten's liquid, diluted one half with hot water. 2. Puncture with the lancet if the skin is soft, with the straight bistoury if the pus is deeply situated. The puncture is small and made in the most fluctuating point; it is not necessary that the incision have a slope, for there will be no discharge in the next succeeding days. 3. Evacuation of the pus, pressing out completely all the liquid contents of the ganglion; it is indispensable to cause all that the ganglion contains to be gently and gradually pressed out, and this procedure is sometimes painful. A few injections of diluted Van Swieten's liquid are now made to wash out well the pouch. 4. Injection of iodoformized vaseline melted by heat; it is to be pressed gently in by means of a glass syringe previously charged and placed in hot water. 5. Dressing with absorbent cotton. As soon as the cavity is full of the iodoformized vaseline, a wad of cotton, soaked in cold Van Swieten's liquid, is placed over the adenitis, and kept in place with a spica. The contact of the cold congeals the vaseline, and makes a plug at the orifice of the bubo. After the first day all pain disappears, and ordinarily healing is complete without cicatrix in an average of six or seven days It is at times necessary to renew the injections of vaseline. Out of forty-one buboes thus treated by the author, more than half were cured in less than five days. The most rebellious required twenty-three days.

ONTARIO MEDICAL ASSOCIATION.

The Tenth Annual Meeting of the Association, is to be held in Toronto in the first week of June next, and the following information with regard to the programme, will be of interest.

The discussion in Surgery will be opened by Dr. M. Sullivan of Kingston, who will read a paper on "Hernia," and will be followed by Dr. McFarlane of Toronto and Dr. Waugh of Lindsay.

In Obstetrics, Dr. A. T. Carson, Toronto, Lecturer on Obstetrics in the Woman's Medical College, will read a paper on the "Prevention of Post Partum Hæmorrhage," and the discussion will be led off by Dr. Powell of Ottawa, followed by Dr. Allen Baines of Toronto.

In Ophthalmology, Dr. Ryerson of Toronto, has chosen for his subject "The Ophthalmoscope in Relation to Diseases of the Nervous System." He will probably be followed in the discussion by Drs. Palmer and Wishart of Toronto.

The President has invited several distinguished gentlemen from across the border to be present and take part in the proceedings, and, while the arrangements are not fully concluded as yet, there is every reason to believe that the Association will have the pleasure of listening to Dr. Andrew Smith of New York, and Dr. Wm. Goodell of Philadelphia. Dr. Emmet, the distinguished gynæcologist, has also promised to be present, if it be at all possible for him to leave New York at that time. With such a trio, we feel sure that the members of the profession will have a treat, the like of which has not been heretofore had in Ontario. While a considerable number of papers have been promised by the members themselves, the list is by no means as large as it ought to be and it is to be hoped that those who desire a place on the programme will not delay in sending their name and subject to the Chairman of the Committee on Papers, Dr. J. Graham, or to the General Secretary, Dr. Wishart.

Among others who have promised papers are Dr. Duncan of Chatham, who will read one on "Duodenal Ulcer," and Dr. Shaw of Hamilton.

The discussions in Medicine and Therapeutics will shortly be arranged for, those which had been made in Therapeutics having been upset by the sad and unexpected death of Dr. McKay of Woodstock.

Royal College of Surgeons, England.—From the *Hospital Gazette* we copy the following paragraph, which will be of interest to the profession in Canada generally, and especially so to those who have "been there":—From the annual calendar, which has just been published, it appears that there are now 1,338 Fellows of the college (737 of whom obtained the distinction by examination); if to these are added the 17,170 members, there is a total of 17,907 qualified medical men, some of them practising in foreign States. The licentiates in dental surgery number 676. Diplomates in public health (diploma granted by the Royal College of Physicians and Surgeons) number 29. During the past collegiate year 170 candidates went up for the primary or anatomical and physiological examination for the Fellowship, 106 of whom were referred. At the pass or surgical examination, out of 83 candidates, 35 having failed to acquit themselves to the satisfaction of the court of examiners, were referred to their professional studies. The board of examiners in dental surgery held two meetings for the examination of 48 candidates, 31 of whom passed. For the first examination under the scheme for an examining board in England, in conjunction with the Royal College of Physicians, there were 735 candidates for elementary anatomy, 600 of whom passed; in elementary physiology 777 candidates presented themselves, of whom 607 passed. In chemistry out of 879 candidates 552 passed, and in *materia medica* 493 out of 804 passed. The examiners in anatomy and physiology, under the scheme, appointed in conjunction with the Royal College of Physicians, conduct the "primary" under the old regulations as well as the second examination of the examining board. In anatomy 937 candidates presented themselves, 382 of whom passed; in physiology 579 out of 1,069 candidates passed. At the final examination the court of examiners examined 864 candidates in surgery, of whom 476 passed and 388 were referred. The receipts from all sources during the collegiate year amounted to £121,337 14s. 5d., the largest receipt being from sale of stock—viz., £87,462 1s. 3d., and the next largest being fees

Remedies for Night-sweats.—The practice of using gr. $\frac{1}{60}$ or $\frac{1}{120}$ of sulphate of atropia for night-sweats is very common, but occasionally cases are met with in which unpleasant symptoms, such as a scarlatinaform rash, dry throat, restlessness, numbness, etc., arise from even the smaller dose mentioned above. It is rather remarkable that

the antidote to atropia poisoning, viz., pilocarpine, should in small doses act well in such cases, as indeed we have found it of much benefit in nearly all cases of night-sweating. The following, taken from the *Med. News*, will be of interest to our readers in this connection :—The various remedies brought forward at different times for this troublesome state have each in its turn proved useless in certain cases, and while agaricin may be mentioned as one of those which deserve the least praise, in our own experience pilocarpine amounting to the twentieth of a grain, given from one to two hours before the sweat is expected, are potent for good. The means by which this result is brought about are not far to seek. The drug in all doses greatly stimulates the peripheral ends of the nerves supplying the sweat-glands. In many instances we find excessive secretion dependent upon depression of function, as in a serous diarrhœa or a local sweating of the feet. These states pass away just so soon as the parts regain their normal tone through proper treatment. The night-sweats of phthisis are improved by pilocarpine, because this drug in all doses stimulates the sweat-glands. In large dose this stimulation amounts to diaphoresis ; but in the minute dose such as we name, the stimulation just balances the depression, and a normal tone is acquired. While it is true that pilocarpine and atropine are physiological antagonists, it will be found practically beneficial to prescribe small doses of both in such cases as refuse to respond to either one alone, as by their antagonism they prevent over-action on other parts of the body, and both act in harmony in so influencing the sweat-glands as to be of service to the physician.

Corrosive Sublimate in Dysentery.—Chowdhovry, *Lancet* (*Med. News*), states that he has had greater success in the treatment of dysentery with bichloride of mercury than with ipecacuanha. The latter treatment he found unsuited to many ients, the nausea produced seriously interfering 'ı nourishment, though small doses, three to grains, combined with sodium bicarbonate, are n useful in acute dysentery. In chronic ıntery at the Burdwan Hospital, with every iety of treatment, the mortality has remained high. Thinking that ipecacuanha owed its r in this disease to stimulation of biliary ation and believing that corrosive sublimate possessed the same influence with no nauseating effects, he resolved to give it a fair trial. His expectations were fully realized, and with the administration of this drug many chronic and seemingly hopeless cases were cured in a shorter time than could have been expected with any other method. The dose he administers is small, five minims of the British liquor hydrargyri (about 1 : 100 grain of sublimate) well diluted every four hours.

The Health Advantages of a Sea Voyage.—Dr. Burney Yeo (*Nineteenth Century*) gives the following as among the advantages of a sea voyage: 1. Perfect rest and quiet, a thorough change of scene, and perfect and enforced rest from both mental and physical labour. 2. The life in the open air and the great amount of sunshine enjoyed, it being quite possible to spend fifteen hours every day in the open air. 3. The purity of the sea-air, no organic dust or impurities —the air of the open sea being the purest found anywhere. 4. The great humidity of the atmosphere and the high barometric pressure, which are considered to exercise a useful sedative influence on certain constitutions. 5. The exhilarating and tonic effects of rapid motion through the air—the sea breezes are constantly blowing over the ship. These breezes increase evaporation from the skin, and impart tone to the superficial blood-vessels.

Disinfection of the Patient in Scarlet Fever.—There can be no doubt that personal disinfection during the desquamative stage of scarlatina is of the utmost importance, as it is then the danger of contagion is greatest. Dr. Maus (*Med. Rec.*) gives the following instructions :

1. Sponge the patient thoroughly, morning and evening, with a tepid solution of corrosive sublimate, 4 to 1000, as soon as the eruption makes its appearance.

2. Wash the hair once daily with a solution of the corrosive sublimate, of the same strength, and also a solution of borax, 1 to 250.

3. Disinfect the urine, fæces, and expectoration, also the discharge from the ears and nose, if there be any. A solution of the bichloride, 1 to 1000, is best for this purpose.

4. as soon as the patient is permitted to leave the bed have the body washed with warm water

and soap, then sponged with the 1 to 4000 bichloride solution, wiped dry, and anointed with the following ointment:—

℞—Sodii biboratis,
Zinci oxidi . . . aa . . . ʒ iv.
Ol. gaultheriæ, ... ʒ ss.
Vaselini, ... ℥ iv.

The hair should be thoroughly washed with the bichloride and borax solution.

5. The patient is then to be enveloped in fresh and clean clothes throughout, and allowed to leave the sick-room if his condition otherwise admits of it.

6. The bed-linen, soiled clothes, towels, etc., should be placed in a suitable sublimate solution and boiled, and the room well disinfected with sulphur. The sulphur candles are very convenient, and the disinfection should be repeated the second day, as the germs are very tenacious of life.

THE CONFORMATION OF THE CHEST AND THE TENDENCY TO CONSUMPTION.—The *Deutsche Med. Zeit.* contains an article on this subject by Dr. Maszkowski. The writer states that it is maintained by many observers, that disproportion in the form of the chest is an important factor in the tendency to tuberculosis The results of a series of investigations have led him to coincide with the conclusions of others in this respect. He selected 275 healthy individuals and the same number suffering from various stages of pulmonary tuberculosis. These persons were subjected to close and careful comparative anatomical measurements, and from this the following conclusions were deduced: 1. That there existed no characteristic form of thorax in those predisposed to pulmonary tuberculosis. 2. That changes in the form and diminution in the capacity of the chest, when such took place, appeared as concomitants, and developed as the disease progressed.

ANTIFEBRIN IN EPILEPSY.—Dr. Diller (*Therap. Gaz.*) gives the following conclusions regarding the use of antifebrin in epilepsy:

1. In all the cases in which the drug was given continuously there was noted a reduction in the number of fits, ranging from about twenty-five to seventy-five per cent., as compared with other months during which patients were on bromide and tonic treatments alternately.

2. The remedy was in all cases well borne, producing no apparent mental or physical depression. This in marked contrast with depressant effects noted after a course of bromide treatment.

3. No skin eruption was produced.

4. In any given case in which a great number of fits are occurring, and where it is desirable to control them as soon as possible, the bromides would be of far more value than antifebrin.

FORMULÆ FOR DYSMENORRHŒA.—The *Univ. Med. Mag.* gives the following formulæ for dysmenorrhœa:

℞.—Bromide of ammonium, . . ʒij.
Bromide of potassium, . . . ʒiv.
Aromatic spirit of ammonia, . fʒvj.
Camphor-water, sufficient to make . . . . . fʒvj.—M.

Of this, from a dessertspoonful to a tablespoonful may be given every two or four hours.

℞.—Aromatic spirit of ammonia, } āā fʒj.—M.
Spirit of nitrous ether, }

From a teaspoonful to a tablespoonful every two to four hours.

℞.—Chloral, ... ʒij.
Bromide of potassium, . . . ʒiv.
Camphor-water, ... fʒvj.—M.

One tablespsoonful every two to four hours.

If nerve prostration is marked, he considers a pill composed as follows very valuable:

℞.—Arsenious acid, ... gr. ¼₀.
Dried sulphate of iron, } āā gr. j.
Extract of sumbul, }
Asafœtida, ... gr. ij.—M.

One pill after each meal, increasing to two pills after each meal.

FOR RUPTURING THE MEMBRANES.—J. B. E., writing to the *Lancet*, says:—For the sake of cleanliness and comfort I always keep my fingernails very short, and consequently have often great difficulty in rupturing the membranes in a confinement. The patient's friends have, as a rul a not unnatural dread of one's using a pointed i strument. Called to a case to-day in which t woman had been in labor about thirty hours, found the membranes roll about in the usual e asperating manner. It struck me that a thimt would answer the purpose, and borrowing one introduced it on the point of the forefinger. T

moment I drew it across the membranes they ruptured, and the child was born in four minutes. I recommend that one should be carried in every midwifery bag.

INFLAMMATION OF THE BREAST AND ITS TREATMENT BY ELASTIC PRESSURE.—Dr. Horne (Dub. *Jour. Med. Science*) gives the following conclusions as to the management of the puerperal breast: 1. Mastitis is rarely seen, except in patients who have suffered from fissured or crushed nipples, and is the result of infectious matter gaining entrance. 2. That, as a rule, the secretion milk of continues only while the natural stimulus, as nursing or other means, continues to be employed. 3. That the secretion of milk, either in normal or inflammatory state, begins to abate when such stimulus is withdrawn, and will entirely cease after a week or two. That in all cases of threatened or inflamed breast, well regulated pressure by means of an elastic bandage should be applied, and no attempt should be made to nurse or withdraw the secretion until the entire subsidence of the inflammatory movement. The advantages of the elastic bandage over an ordinary roller are: 1. It is easier of application. 2. The pressure is more uniform. 3. It is not so likely to slip. 4. It is more comfortable to the patient, as requiring much less material. 5. It is not necessary to apply it over the shoulders.

THE PATHOLOGICAL EFFECTS OF CHLOROFORM INHALATION.—Dr. Robert Ostertag sums up a lengthy paper (*Lancet*) on this subject as follows: 1. That after long-continued inhalation of chloroform by different animals there may arise fatty degeneration of organs, especially fatty infiltration of the liver, fatty metamorphosis of the cardiac and skeletal muscles, kidneys, and stomach. 2. These fatty changes result from the action of chloroform upon the blood (destruction of red corpuscles) and upon the tissue cells. 3. Some individuals have a greater susceptibility to this action chloroform than others, and succumb at an earlier period to its effects. 4. The fatal effect is due to cardiac paralysis, which may occasionally be accompanied by but slight anatomical lesion of the myocardium, and also to gradual carbonisation of the blood.

STAMMERING.—Says the *Kansas City Medical Journal*: It is a well-known fact that stutterers, when speaking in a whispering voice, show no impediment of speech. A new method of treatment has been advocated by Dr. Coen and is as follows: In the first ten days speaking is prohibited. This will allow rest to the voice, and constitutes the preliminary state of treatment. During the next ten days speaking is permissible in the whispering voice, and in the course of the next fifteen days the ordinary conversational tone may be gradually employed.

MENTHOL IN PRURITIC AFFECTIONS.—This remedy is highly recommended by Saalfield in various forms of pruritus. He gives it either as a lotion or ointment, his formulæ being—

1.	℞—Menthol, ...	gr. 22-37.
	Spirit vin. rect., . . .	ʒ j ℥.
2.	Menthol, ...	gr 37.
	Ol. olivarum, ...	(ʒ ij.-ʒiij.)
	Lanolin, ...	ʒ j ℥.

He has had excellent results in urticaria and various forms of pruritus.

PERSPIRING FEET.—Not long ago the relative values of various remedies for the treatment of perspiring feet were being tested by military surgeons abroad (*Med. and Surg. Rep.*) A weak chromic acid solution seemed to yield the best results and was adopted for the German army. Still, the acid solution is not entirely satisfactory, since it must be used most cautiously, and when applied to sore feet, not unfrequently gives rise to severe inflammation.

A simple and perfectly harmless preparation is the following:

℞.—Talc, ...	10 parts.
Alum, ...	2 parts.

Mix, and dust freely and frequently on the feet.

This preparation has proved most efficacious and is largely used in the Swiss army.

DEATH FROM SULPHONAL.—A death has been reported (*Med. Rec*) following the use of two fifteen-grain doses of sulphonal, the doses being given an hour and a quarter apart. The fatal results occurred forty hours after the first dose. The patient was a woman with melancholia, aged twenty-eight. The mode of death was apnœa.

A PETITION for the placing of Medical and Surgical Instruments and appliances upon the free list, was forwarded last week to the Minister of Customs, on behalf of the Ontario Medical Association.

DEATH OF MRS. W. B. GEIKIE.

In the midst of her family, with nothing left undone that thoughtful care and affection could suggest to soothe her dying moments, Mrs. W. B. Geikie, the beloved wife of Dr. W. B. Geikie, Dean of the Faculty of Trinity Medical College, passed peacefully away in her 58th year, at her late residence, Holyrood Villa, 52 Maitland St., Toronto, on the afternoon of Thursday the 30th ult. As long ago as 1855, Mrs. Geikie, previously quite as strong as most persons, had a very sudden and most dangerous illness, after which, her health was never restored to what it had been before the attack. She was a lady of great energy in discharging every duty which devolved upon her in her home, which in her estimation had the principal claims upon her, as a wife and mother; and this large degree of conscientious devotion to home duties characterized her entire life.

About twelve years ago a severe attack of pleurisy nearly cost her her life, and since this illness she has been more or less a constant sufferer; of late years, the secondary results of the injury done to the left lung by the pleurisy, became more and more serious. Her heart's action became seriously and increasingly affected, and a very severe cough, paroxysmal in its character, greatly added to her sufferings; digestion became very feeble and within the past two or three years she became much emaciated, until compelled to keep her bed for the last four weeks of her life.

Mrs. Geikie, while unable from bodily weakness, to do a great deal that was seen or known publicly, was a very devoted and most earnest Christian worker—and a good many homes of the poor will miss her kindly visits. As we have said, her special life work has been very unostentatiously performed in her home, and her intense and constant solicitude for the temporal, but more especially for the eternal welfare of every member of her family, leaves a blank which can only be fully estimated by a household from which a most affectionate wife, and one of the best of mothers has been taken.

THE BOOKS in the medical department of the Public Library, 213 in number, were this week transferred to the Medical Library on Bay Street.

Books and Pamphlets.

A HANDBOOK OF DISEASES OF WOMEN, including Diseases of the Bladder and Urethra. By Dr. F. Winckel, Professor of Gynæcology, etc., etc. Munich. Edited by Theophilus Parvin, M.D., Professor of Obstetrics, and Diseases of Women and Children, Jefferson Medical College, Philadelphia. Second edition, revised and enlarged, with 150 illustrations. Philadelphia: P. Blakiston, Son & Co., 1889. Toronto: Carveth & Co., p.p. 766. Cloth, $3.00; leather, $3.50.

This edition is considerably improved. The editor is so well and favourably known as a specialist in his subject that the work coming from him is sure to be well received, as the earlier edition has always been popular in both Great Britain and America. The addition of a section upon diseases of the bladder and urethra will be welcome, and is in accordance with the wishes of Prof. Winckel, from whose monograph on that subject it has been chiefly derived. The work is clear and concise, and contains, we believe, all that is necessary for the ordinary practitioner, in a small compass.

THE STORY OF THE BACTERIA AND THEIR RELATIONS TO HEALTH AND DISEASE, by T. Mitchell Prudden, M.D. New York: G. P. Putnam's Sons, Toronto: Vannevar & Co., 1880, pp. 138.

The writer seems to have well accomplished his object, which is, he says, "to present some facts from a small corner of the domain of Science in such form as will be plain to the unscientific, and with these some extracts from the lore of the physician which will, it is hoped, be both interesting and useful to the lay reader."

A HANDBOOK OF DERMATOLOGY FOR THE USE OF STUDENTS, by A. H. Ohman-Dumesnil, A.M., M.D., Professor of Dermatology, St. Louis College of Physicians and Surgeons, etc., etc. Illustrated. St. Louis *Medical and Surgical Journal* Publishing Co. Toronto: Vannevar & Co., 1889.

A handy little book of 159 pages. It contains much useful and easily getatable information for students.

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Original Communications.

GLAUCOMA.*

BY V. H. MOORE, M.D., BROCKVILLE, ONT.

I desire to call your attention for a few moments to glaucoma, one of the most important and dangerous diseases of the eye. This disease very frequently comes under the observation and care of the general practitioner, and it is therefore as necessary for him to be able to diagnose a case of glaucoma as one of peritonitis or pneumonia. The diseases of the eye have been sadly neglected by the profession in Ontario. The teaching bodies place this subject upon the optional list, while the Medical Council do even a greater injustice, in that they ignore it entirely. Why a knowledge of the diseases of the uterus and its appendages should be held by these bodies to be a requisite (while one-half of the population have no such organs nor appendages), and diseases of the eye ignored, is a puzzle to me. I hold that a knowledge of the diseases of the eye is as important to the general practitioner as that of any other organ in the body, and therefore it should be given its proper place in the curriculum of medical stu dies. Is it not strange that for so many years we have neglected the eye and its ailments, and thus allowed so many of our fellow creatures to be clothed in darkness, shut out from the beauties of nature, the charm of color, the achievements of art, the joy of smile, and the faces of those they ve? I might dilate upon this, but time will not rmit on this occasion. Suffice it to say, that of the special senses vision is the most dear, and refore any knowledge that will restore or pro- g it should be known by every medical practi- ner. It is in consequence of this conviction t I have brought this subject before you to-day.

* Read before the Ontario Med. Association, June, 1889.

I have no hope of adding anything to the knowledge of the specialists, as few new facts of importance have been discovered of late, but I wish to emphasize some of the old truths, and show that this disease may be diagnosed, without a practical knowledge of the ophthalmoscope, with a degree of certainty calculated to do a vast amount of good and save scores of eyes. The general practitioner may by a little attention to the prominent symptoms be able to make an early diagnosis (the only one of value), and if he does not wish to operate himself, the case being a severe one, he will submit it at once to an oculist, before it is too late.

This disease is usually met with late in life. It is rarely seen before the thirtieth year and generally met with after the fiftieth. A large proportion of the eyes affected are hypermetropic. It is no respector of persons nor constitutions; the rich and the poor, the strong and the weak are alike attacked. It makes itself manifest in various ways. We have it coming on so insidiously that the patient's attention may not be called to it until the vision is greatly impaired or irrecoverably lost. In this form there is no pain, no external evidence of inflammation, the eye appears healthy, the media is clear, cornea and iris normal, and the anterior chamber of proper depth. The pupil may be somewhat sluggish and slightly dilated, tension is increased and cupping of the disc will be found upon ophthalmoscopic examination. This would be called simple glaucoma by Donders, Mittendorf, Noyes, Fox and Bull, and chronic simple glaucoma by Juler and Swanzy. Such cases are the ones most likely to be overlooked by the general practitioner. But if he has educated his fingers to the tension of the normal eye, he will discover the increased intra-ocular tension (always a cause for alarm), and then look for a diminution of the field of vision, especially on the nasal side, rapidly increasing hypermetropia, anæsthesia of the cornea, gradual failure of central vision, sluggish and dilated pupil, and shallowness of the anterior chamber. Upon ophthalmoscopic examination decided cupping of the disc will be found, veins enlarged, arteries pulsating, especially upon slight pressure of the eye.

Again, we may have it coming on as acute inflammatory glaucoma, with or without a premonitory stage.

Usually the premonitory symptoms precede an acute attack and are as follows: rapid impairment of accommodation, with increasing presbyopia; rainbow-like rings around the gas or candle flame, a cloudy condition of sight which the patient will liken to looking through a fog or mist and momentary loss of vision. Should an acute attack now supervene we should find the following chain of symptoms: increased tension of the eye-ball, rapidly increasing presbyopia, congestion of the anterior ciliary veins (venous hyperæmia), marked arterial pulsation, cloudiness of the aqueous and vitreous humors, with opacities; pupil dilated, of oval shape and quite irresponsive to light, dimness of sight, contraction of the field of vision, shallowness of the anterior chamber, anæsthesia of the cornea and diminution of its lustre, giving it a steamy look, chemosis, epiphora, discoloration of the iris, intense pain, cupping of the disc, nausea and vomiting. These symptoms may pass off, leaving the eye with some defects of central vision, increased tension, and a sluggish and slightly dilated pupil; or they may return again and again, leaving the sight more impaired with each attack, until the vision is completely destroyed. These attacks have frequently been mistaken for neuralgia or stomachic trouble, and only discovered when too late to save the sight.

Acute inflammatory glaucoma usually comes on at night. Occasionally these symptoms come on without any premonitory stage and with such violence as to destroy the sight completely in a few hours. This form is known as glaucoma fulminans, so named by Von Graefe. This form requires prompt treatment.

Again, we have it coming on as chronic inflammatory glaucoma, in which the inflammatory process is similar to that of the acute, only less severe and slower in progress. It is often caused by excitement, mental anxiety or fatigue, excessive exercise or a full meal. It may come on insidiously, as chronic inflammation, recurring frequently, and gradually destroy the sight, or it may be ushered in as an acute attack, which gradually subsides into a chronic form. Acute attacks may develop at any time during the course of the chronic form, and keep on returning at intervals until an iridectomy has to be done for the preservation of sight and relief of pain. Chronic inflammatory glaucoma may lead to complete loss of sight without any severe inflammation or acute pain, and this is the main characteristic between it and the acute form.

Secondary glaucoma is consequent upon some other disease already existing in the eye, such as intra-ocular tumors, staphyloma of the cornea or sclerotic, serous iritis, swelling of an injured lens, or dislocation of the same.

Hæmorrhagic glaucoma is produced by effusions of blood into the retina or optic nerve, and sometimes into the vitreous. These hæmorrhages are usually followed in a few weeks by increased intra ocular tension and the development of acute or sub-acute glaucoma. The chief point of difference between this form and the ordinary, is that loss of vision precedes by some time the actual onset of the inflammatory process. The symptoms are not constant, but subject to great variety. Usually only one eye is affected. There are no premonitory signs. The first symptom is sudden loss of sight. Noyes is of the opinion that in some cases at least, the cause is due to embolism of some of the retinal arteries, with consecutive hæmorrhages in consequence of an atheromatous condition of the vessels, rendering them unable to adjust themselves to the disturbances in the circulation.

This disease may be diagnosed from plastic cyclitis by the following symptoms: In plastic cyclitis we have a deep anterior chamber, deeper than normal and no increase of tension, while the eye is very sensitive to pressure over the ciliary region. From serous cyclitis by the increased depth of the anterior chamber, absence of pain, unless the tension is increased by hypersecretion of aqueous humor, when an examination of the field of vision will tell the tale, and by the appearance of a dust-like opacity in the anterior portion of the vitreous humor. From purulent cyclitis by the appearance of membraneous opacities in the vitreous and hypopion in the anterior chamber. From iritis by the pericorneal injection, occlusion of the pupil, the presence of an inflammatory exudation in the iris, pupil and posterior surface of the cornea, posterior synechia, and increased depth of the anterior chamber as seen in serous iritis, in which case the pupil may be dilated. The history of the case must borne in mind as it is frequently due to rheumatism, gout or syphilis, and often is consequ

upon wounds of the cornea, lens or lens-capsule. The location of the pain will also serve as a guide, so will, too, the age of the patient, as it is usually found in middle-age, rarely in young children or persons advanced in years. From choroiditis, by the early appearance of floating opacities in the vitreous, the fact that myopes are often attacked, and that it usually follows debilitating diseases, such as small-pox, septicæmia, typhoid fever, etc., and occurs at all ages. It is often due to syphilis, rheumatism, gout and mechanical injuries. From papillitis by the normal condition of the tension, pupil and anterior chamber, the enlarged size of the blind-spot, while the vision may not be impaired, and the fact that both nerves are usually affected, and that the affection is generally due to intra-cranial disease such as cerebral tumor or abscess. From atrophy of the optic nerve, by the impaired color vision, at first having difficulty in recognizing green, then red, and next yellow. This progresses gradually until nothing is left in the field but blue. There is no pain nor unpleasant symptoms present except a delicate haze which appears to be spread over the sight, and which gradually increases. Both eyes are usually attacked, and the pupils may be contracted or dilated, depending upon the seat of the cause. If the lesion is in the brain the pupils will be dilated, if in the cord, contracted. Fifty per cent. of the cases of atrophy of the optic nerve are due to diseases of the brain or spinal-cord, and therefore we should look for signs of ataxy, knee reflex, etc. The symptoms of this affection are constant. Central vision is affected and grows worse as the disease advances. The ophthalmoscope will show the cupping of the disc peculiar to atrophy.

We now come to the consideration of the causes, and, as Noyes says, we here enter upon the field of speculation. That we have an increase of the intra-ocular fluids causing tension, I have no doubt, but just what causes or produces that increase is still an open question. We have nearly as many ories as authors, but those looked upon with st favor are hypersecretion and retention, the er having the most adherents, although open objection. Von Graefe believed the tension l disease were due to serous choroiditis; Don-, Hippel, Grünhagen to irritation of the fifth of nerves; Mauthner to some lesion of the ic nerve, and a peculiar form of choroiditis; Jaeger to some primary optic nerve disease; Stellwag to rigidity of the sclera; Lange to disturbances of the circulation. Knies, of Vienna, and Weber, of Darmstadt, to adhesion of the periphery of the iris to the border of the sclero-corneal junction. Weber believed that this was occasioned by swelling of the ciliary processes. Priestly Smith, of London, says it is due to narrowing of the circumlental space in consequence of the gradual enlargement of the lens, which takes place as we grow older. Noyes, like Priestly Smith, believes in the retention theory. Stolting says it is due to strain upon the ciliary body which sets up an inflammatory process in the choroid, thereby blocking up the lymph streams about the venæ vorticosæ and thus lessening the circumlental space, which is followed by retention (same as from enlargement of the lens, according to Priestly Smith's theory), and consequent pushing forward of the lens-system and closing the canal of Schlemim. Schœn holds that the constant strain on the ciliary muscles while endeavoring to overcome the presbyopia creates irritation and causes thickening of the zonula and capsular leaflet, and finally the muscle weakens and the lens-system is pushed forward, closing up the excretory channels. Rheindorf has practically the same opinion. Brughsch thinks that a small cornea is a predisposing cause, and believes that to be the reason why the Semitic is more prone to this disease than any other race. He has carefully measured the corneas of a large number of Egyptians and found them smaller than those of the Anglo-Saxon race. He noticed that the artificial eyes sent from Europe were furnished with too large a cornea to correspond with the normal Egyptian eye. Schnabel condemns the whole pressure theory. Glaucoma is met with more frequently in Europe than America. It may be hereditary, and it may be brought on by certain exciting causes, as over-indulgence in stimulants, tobacco, and by excessive exercise, mental anxiety, injuries, etc.

The prognosis in this disease is unfavorable, as its tendency in all forms is to total loss of sight. It may be years creeping towards the dreadful end, or it may destroy the vision in a few hours. Sight may be lost for a time, during an acute attack, but after the subsidence of the inflammation it may return again, generally somewhat reduced in quantity. Both eyes will in time be affected.

The treatment of this disease is not satisfactory, as it rarely results in perfect recovery. Prior to 1857 (when Von Graefe discovered iridectomy), it was looked upon and justly so, as one of the most destructive diseases of the eye. Iridectomy lessens the tension, relieves the pain, and if done early will prevent injury to the optic nerve and save the sight. Delay is more than dangerous. Von Graefe says that after the third day the restitution is sometimes very imperfect. In glaucoma fulminans, a few hours' delay may result in complete blindness. This operation may be done in all forms and in all stages, excepting in simple glaucoma, when vision is gone and in the hæmorrhagic variety. Iridectomy gives the best results in acute and sub-acute cases. It does not always succeed in improving vision; sometimes it is worse after the operation, but it may be in a measure due to the large and irregular pupil and the astigmatism which may result. Sometimes the operation produces an attack in the other eye, but fortunately such cases are rare. I will not take up your time with a description of the operation, but pass on to the consideration of sclerotomy. This operation has some advantages over iridectomy, yet it will I think never supplant it. Sclerotomy is better suited for cases of simple glaucoma, especially when we wish to avoid the unpleasant dazzling effect of the broad new pupil, in cases where it is desirable to avoid disfiguring the eye, and in absolute glaucoma when we are operating for the relief of pain. It should not be attempted in cases where eserine will not produce well-marked myosis. Vaher reports six cases of progressive glaucoma unaffected by eserine or iridectomy, in five of which the pain and tension were relieved by posterior sclerotomy. Motais, as a last resort, has made a sub-conjunctival fistula in the posterior division of the eye, lessened the tension and so avoided enucleation. In many cases of simple glaucoma, paracentesis will be followed by good results, tension lessened, pain relieved and vision restored. Simi reduced the tension to normal by repeated punctures of the sclerotic, and completed the cure by an iridectomy. Eserine is a very valuable drug in this disease. It lessens the tension in many cases, relieves the pain and sometimes cures the attack. Knapp speaks of it in the highest terms. He says he has cured cases of glaucoma by instillations of eserine. He also says when it produces incomplete myosis and fails to overcome the tension, that iridectomy should be done at once. It is used with very great benefit when we want to postpone an iridectomy, and often a judicious employment of this drug will render the operation unnecessary. Armaignac says he has reduced the tension permanently to the normal in acute glaucoma, by alternate instillations of eserine and cocaine. Quinine is spoken of as a remedy calculated to ward off an attack. Dr. Adamük reports a case in the practice of Iwanoff, where the premonitory symptoms were kept in abeyance for three years, by small doeses of quinine daily. Mittendorf recommends it in large doses in the premonitory stage; he also speaks well of bromide of potassium. It is necessary for persons threatened or afflicted with this disease to look after their general health, avoid all excitement and violent exercise or anything that might have a tendency to increase the amount of blood in the eye. Keep the digestive tract in good condition, also the excretory organs active, go to bed early, keep the brain quiet, give the eyes complete rest, correct any error of refraction that may be present, avoid all medicines that have a tendency to dilate the pupil, and on no account suffer atropia to be put into the eye. This drug has been known to produce an attack of glaucoma. Stimulants should be avoided, and if taken at all only in small quantities. Any specific disease that might be present should be attended to, and when operating, the most careful attention should be paid to antiseptic precautions.

SOME CAUSES OF HEADACHE.*

BY G. STERLING RYERSON, M.D., C.M., L.R.C.S. EDIN.,
Professor of Ophthalmology and Otology in Trinity Medical College.

No more familiar symptom is brought to the notice of the physician than that of headache, and when presenting the chronic form, none is more difficult to remove. Many of the sufferers from cephalalgia are told that it is "constitutional," and with this comforting assurance are condemned to life-long suffering. The researches of Dr. Hughlings-Jackson, Tweedy and Anstie in England, of Erb in Germany and of Stevens in Am

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rica, have demonstrated the fact that a frequent cause of chronic headache is to be found in the mal-adjustment of the eyes.

I would briefly recall to your minds what constitutes hypermetropia. It will be remembered that in this condition the antero-posterior diameter of the eye is too short; consequently parallel rays entering the eye are focused *in front* of the retina. In order to bring them to a focus, a muscular effort of accommodation is necessary. In the higher degrees no effort of accommodation, no matter how great, can accomplish this. Consequently the poor hypermetropic starts life with a deficit and is obliged to draw upon his reserve of nerve force for the purposes or ordinary vision, where emmetropes (normal-eyed persons) use no accommodative effort.

In the case of astigmatism, where the parallel rays entering the eyes are focused differently in the vertical and horizontal meridians, there arises a constant visual perplexity; for while accommodation is adjusted for one part of the object, it is disarranged for another part.

In another class of cases, the extrinsic muscles of the eye do not work together harmoniously There is a sort of family quarrel among the muscles—one set or more muscles working against the others—with consequent great discomfort to the owner of the warring members. The main difficulty is to maintain binocular vision, in other words, to keep the eyes parallel, so that rays shall be focused in eyes as not to cause double vision. It will thus be seen that the nerve centres are subjected to prolonged irritation, and it is not surprising to learn that they resent this kind of treatment and that the nerves cry aloud with pain, and that the whole head is sick and the heart is faint.

George T. Stevens submits the following proposition:—"Difficulties attending the functions of "accommodation and of adjusting the eyes in the "act of vision, or of irritations arising from the "nerves—involved in these processes—are among he most prolific sources of nervous disturbances, nd more frequently than other conditions con-tute a neuropathic tendency."

will be noticed that other causes are not luded and that it only claimed that mal-ad-ment is a *most prolific source* of reflex and tional nervous disorders.

form of headache most commonly met with in connection with mal-adjustment of the eyes is characterized by pain in temples in supra-orbital and occipital regions and more rarely on the top of the head. It is paroxysmal, sometimes recurring with comparative regularity, but generally worse after anxiety, care, worry or excitement. In some cases pain is continuous, with occasional exacerbations. Besides pain in the head, there has been found habitual pain at the orifice of the trapezius muscle and at the lower angle of the scapulæ. These pains occur less frequently in men than in women. Men suffer more from occipital pain. Dyspepsia frequently accompanies the headaches, and may be explained on the principle of increased demand upon the nervous energies already exhausted by the ordinary requirements of the system. Insomnia is also a common accompaniment of these headaches.

Stevens goes so far as to state that errors of adjustment can cause epilepsy and chorea. But I am not in possession of facts under my own observation to justify me in going to this length. That headache is very frequently caused by eye defect I think will be admitted, when I state that during the examination of the sight of 4415 children in public schools in this city by Dr Gibb Wishart and myself, we found 408 children who were hypermetropes, and of these 192 admitted to suffering from headache after use of the eyes.

I will not weary you with any details of cases, but say that my object in preparing this paper is to simply draw renewed attention to the fact that errors of refraction and want of balance of the muscles of the eyes are prolific sources of headache and neurasthenia, and to suggest that in all cases of chronic headache the refraction should be tested and the muscular indices be determined, in order that the patient may be afforded every chance of escape from his ills.

ERGOT IN THE TREATMENT OF PNEUMONIA, WITH NOTES OF A CASE.

BY F. WINNETT, M.D., M.R.C.S., ENG., TORONTO.

Mr. W., a gentleman aged 39, of a florid complexion, weighing 240 pounds, was first seen at noon Jan. 8th, the second day of his illness. He was recovering from la grippe and had had pneumonia some years previously.

He presented the usual symptoms of lobar pneumonia with excessive congestion. The apex of the right lung alone escaped.

Jan. 8th, 1 p.m.—Temp. 103°, pulse 120 intermits, resp. 25 ; cough very troublesome, prevented him sleeping the previous night, great dyspnœa ; sputa very copious, almost pure arterial blood. He was given ext. ergotæ fl. M. xv with tinct. opii M. v every two hours for four doses ; the pulse to be carefully watched. Diet—milk and soda, beef tea.

Jan. 8th, 9.30 p.m.—Temp. 99°, pulse 113, resp. 20 ; breathes freely, cough not troublesome, sputa less copious and red. Directed medicine not to be given, unless primary symptoms recur ; none was given.

Jan. 9th, 7 a.m.—Temp. 99⅘°, pulse 99, resp. 26 ; perspired freely, slept three and a half hours, expectoration scanty, cough a little troublesome.

Jan. 9th, 5.30 p.m.—Temp. 101⅕°, pulse 104, resp. 28 ; expectorated more freely, cough troublesome, sputa copious and red, dyspnœa marked, and cyanosis.

The ergot being again indicated, it was resumed. Sol. ergotinæ hyp. M. v was diluted with 25 minims of water and given in subcutaneous tissue of abdominal wall every four hours.

Tinct. digitalis and tinct. nux vom. of each M. 7½ was given at intervals of four hours, to stimulate the heart and counteract the weakening effects of the ergotine. Morphia gr. ¼ to be given at night when cough was troublesome.

10th, 7 a.m.—Temp. 100⅘°, pulse 96, resp. 25 ; not cyanosed, breathing easy, slept forty-five minutes, cough troublesome, sputa less bloody and better ærated. Turpentine inhalations ordered to be given frequently.

Lithia salicylate grs. xv directed to be given every four hours, as urine is scanty and severe pain is complained of in the lumbar region.

10th, 7.30 p.m.—Temp. 99⅕°, pulse 90, resp. 18; breathes very quietly, sputa less bloody.

11th, 7 a.m.—Temp. 98⅘°, pulse 98, resp. 22 ; slept five and a half hours.

11th, 7 p.m.—Temp. 99°, pulse 100, resp. 20 ; sputa scanty and very slightly streaked with blood, copious evacuation of bowels with straining.

12th, 8.20 a.m.—Temp. 97⅘°, pulse 88, resp. 24 ; at 4 a.m.—resp. 18, and the ergot being missed the resp. went up to 24. At 8 a.m., ergotine was given and at 10 a m., resp. down again to 20.

12th, 7 p.m.—Temp 98⅕°, pulse 88, resp. 20 ; cough and sputa very little. Enjoyed a mutton chop for dinner.

14th, a.m.—Medicine discontinued.

15th.—No rales, pulse not intermitting.

16th.—Sat up in chair for two hours.

This case is interesting only in connection with the administration of ergot, of which I can find no mention in the regular text books of medicine or therapeutics. An article is to be found in the Philadelphia *Medical Register* of 1887, highly recommending it in certain cases of pneumonia. Its action in this case was almost instantaneous. Cause and effect following each other with such precision that little doubt could be entertained by the most sceptical.

A drug, the physological action of which is conceded to induce a condition diametrically opposite to that found in pneumonia—dilated arterioles, capillary stasis and increased blood-pressure—must recommend itself in the treatment of that disease.

Selected Articles.

THE PRESENCE OF SUGAR IN THE URINE.

(Continued from February No.)

I will pass now to another somewhat new aspect of glycosuria. In the paper to which I have already referred I noted several cases in which glycosuria or, as it has been called, diabetes, preceded, or was preceded by, angina pectoris, and subsequently co-existed with it. Several cases of the same kind have since come under my knowledge. I will venture to detail one which was under my observation for some time.

A gentleman of the age of 62, consulted me in June, 1886, complaining, in the first place, of a cough which had been distressing him for six weeks. The cough did not appear to be due any affection of the lungs, heart, or stomach, b rather was attributable to a deep dusky congestic of the throat, such as one often sees in gou people. The patient was a man of singular refi ment and delicacy, and at the same time of mu acute sensitiveness and irritability. He had l flesh, complained of low spirits, of much unfound anxiety, and of serious want of sleep. I urine was at that time of specific gravity 1(

and while containing no albumen, gave a very decided reaction of sugar. I prescribed for him a careful diet, bromide of ammonium and codeia, but did not see him again till some weeks later, when he was the subject of a very sharp attack of quinsy—a typical gouty quinsy. During this attack the sugar disappeared entirely from the urine, but albumen made its appearance. After the attack the sugar returned, but in smaller quantity, and for a time his health improved; but in June, 1887, after an absence of several months, he came to me with new symptoms. They were, in the first place, symptons of angina pectoris. He lived in a suburb from which a train took him to the city. To catch the train it was necessary that he should walk up a short acclivity beginning at his garden gate. Starting from home, shortly after breakfast, he was obliged, after walking a few yards, to stop and hold on by the palings, feeling, as he said, as if he were ready to die by reason of a strong sense of constriction of the chest, which seemed to be about to stop him altogether from breathing. After holding on for a few minutes he would recover his breath, and would generally be able to walk to the station. Sometimes, however, a second attack would intervene. At this time, although he had gained flesh, his general condition was a good deal worse than it had been a year before. His heart was now decidedly enlarged, and the enlargement appeared to be due chiefly to dilatation on both sides. The heart sounds were weak and obscure, and although I could detect no definite murmur I came to the conclusion that there was not only impaired nutrition of the muscular wall, but commencing valve disease. He was still suffering from much irritability and insomnia. The urine was now of specific gravity 1028, contained a little albumen, and gave a strong reaction of sugar. Rest, diet, and the use of strophanthus, in addition to codeia, brought about some improvement for a time. But three months later I was called, in great haste, to see him in consultation with his usual medical adviser. I found now that he had constantly recurring attacks of angina, by day and by night, altogether independent of muscular exertion. A careful examination led to the establishment of the diagnosis of sharp gastric catarrh. He had a foul tongue, thirst, frontal headache, nausea, occasional vomiting, and loss of appetite. The urine contained ill a little albumen and much sugar. I advised reful evacuation of the bowels and the use of datives for the stomach in the form of carbonate bismuth, with bicarbonate of potash and tincre of belladonna. But before these remedies uld have time to operate, his sufferings increased a terrible degree. His attacks of angina were ost continuous, and he had to sit night and with his head supported on a rest in front of . Under these circumstances, many remedies were used by those in immediate charge of him. Nitro-glycerine and nitrite of amyl were of some use. For the insomnia various hypnotic remedies were applied But it appeared to me that they were only of temporary value, and that the essential method of treatment was to overcome the gastric catarrh. It seemed that this definitely established condition was the abiding cause of the angina, so we resolutely attacked it with various remedies until it yielded. When it passed away, the angina gradually diminished, and the patient was able to leave his house and go to Margate, where he remained for some time in comparative comfort—until one day, moving suddenly from the breakfast table, he was seized with a fatal attack of angina. During all this illness, his urine was carefully examined. There were, indeed, difficulties in the way of estimating the quantity of urine passed daily: but the quantity of sugar in the specimens examined was always greater than it had been before.

I could cite some other cases, but will only say that the same kind of association has been more than once observed. Now, if we carefully consider what is called angina pectoris, I think we must admit that it is no more an essential disease than glycosuria; and, as I have seen it, and thought over it, I recognise in it, varieties of form and causation which run in curiously parallel lines with those of glycosuria. Every one, no doubt, must recognise the typical form of angina pectoris wherein degeneration of the heart muscle plays one part and arterial stress another; and everybody also will, I think, be ready to admit that disorder of innervation plays an important part in disturbing the balance between the heart and the arteries. Not improbably, indeed, this may be the first and common factor. In such a case as I have just described it looks very much as though disordered innervation was the starting point of the whole mischief.

If it were so, the position of the glycosuria has to be fixed. It might have been also a mark of disordered innervation. It certainly preceded heart and stomach disorder; and after being a herald of them, increased as they began and developed. But if the glycosuria were of hepatic origin, it seems to be necessary to admit that while there was undoubted tension of peripheral arteries in the limbs and head and neck, there must have been dilatation of the hepatic artery, or indeed some defect of digestion or of assimilation. It is impossible to eliminate entirely the last two causes, or to estimate their possible value. But comparing this with other cases, I cannot help cogitating in what ways disturbance of the arterial circulation of the liver may possibly occur in angina.

It is I think quite certain that excitements of the central nervous system may produce at one and the same time arterial relaxation in one part

of the body and arterial contraction in another. One often sees people who, under one or the other form of perturbing influence, become flushed and hot in the face and cold in the extremities, or hot in the extremities and cold in the face.

In such a case as that which I have quoted we might, on the other hand, recognise a perturbing nervous influence as a cause of peripheral arterial tension, of defective nutrition of the heart, of glycosuria, and probably of the faucial and gastric affection.

There is much reason in fact to look upon this as the best explanation of the whole array of phenomena. But in a preponderance of the cases presenting glycosuria together with symptoms of angina, the evidence of primary neurotic disturbance has not been so strong. In thinking over these I have been inclined to recur to a point shortly dealt with in the commencement of this paper, and to consider how far it might be possible that excessive tension of the arteries in one part of the body might be, so to speak, balanced by excessive blood pressure in arteries or other parts of the body. Surely this is what we, in a may, invoke when we attribute an internal inflamwation to a chill of the external surface, or when we apply an irritant to the surface of the body in order to reduce inflammation in an internal organ. In addition we must not forget the reflex influence of one organ on another. Stomach disorder may have had its share in the production of the glycosuria, as it certainly had, in the case quoted, its share in the intensification of the angina. As one studies angina, one certainly finds that many apparently accessory conditions have to be dealt with in its treatment, notably for one, constipation.

All constipation is certainly attended with increase of arterial tension. In the treatment of angina I have found practically that the maintenance of a daily action of the bowels has been a need of the first importance, just as I have found that the avoidance of over-filling of the stomach, often resorted to where the patient is weak and failing, is imperatively necessary.

But I must not be diverted into a paper on angina, and I do not at the present propose to enter further into the relation of affections of the nervous system with glycosuria than has been dealt with in my former paper, and illustrated in this.

I have but one conjunction to put before you. A year or two ago one of my house-physicians, Mr. W. W. Ord, making thorough examination, according to rule, of a patient just admitted to St. Thomas's Hospital, found that her urine gave a strong reaction of sugar. She had been admitted for acute rheumatism, arising during lactation. Her child having been separated from her, it had been necessary to use applications to stop the flow of milk. The breasts had been strapped with belladonna plasters, and extract of belladonna had been applied over the nipple areolæ. The examination of the urine was made within a few hours after the institution of this treatment, which evidently proved effective in staying the secretion of milk. After the detection of sugar, frequent examination of the urine was made. The sugar reaction turned out to be most marked in the beginning, and gradually diminished until at the end of three days it had entirely disappeared. Similiar observations have been made in six cases —four in St. Thomas's Hospital, two at the Cane Hill Asylum. The chemical reactions obtained have appeared to correspond exactly with those which would be yielded by glucose, but their rapid evanescence has so far stood in the way of the obtaining any sufficient quantity of urine to afford opportunity of a complete investigation. The indication is, apparently, that the stoppage of the secretion of milk has determined a backward flow into the vessels of lactose in a quantity so large as to be represented by the appearance of a considerable quantity of glucose in the urine. That lactose introduced into the system as a constituent of milk through the stomach, not only acts as a diuretic, but gives rise to glycosuria is asserted by M. Germain Sée. About last midsummer my friend Dr. Keser was good enough to send me a copy of the *Semaine Médicale* of June 12th, containing a note on "Un Nouveau Médicament Diurétique dans les Maladies du Cœur, la Lactose."

I have since seen many references to this paper, which states that an enormous diuretic action is established by the use of 100 grammes of lactose (that is to say, the quantity contained in two litres of milk), while there is no certainty of obtaining this effect by four or five litres of milk. M. Sée goes on to say that while milk taken in large doses produces diuresis and a very marked glycosuria, large doses of lactose cause a remarkable polyuria, but no glycosuria. My house-physician's observation would appear to agree with this, so far as the suppression of lactation is concerned. The two sets of notes appear to confirm one another.

Both appear to me to suggest questions that should be carefully worked out. Why lactose given by itself should produce diuresis without glycosuria; why lactose given with other constituents of milk should give rise to both, while requiring a larger dose, is what at present I do not profess to understand.

M. Germain Sée believes that the sugar remains in the blood when lactose is administered pure. With all respect to him, I think that the whole conditions require further elucidation.

With this I conclude my paper this evening. I trust that you will understand that I have been, so to speak, talking from my notes, thinking of the many ways in which glycosuria presents itself as a symptom in various diseases and disorders

and trying to find out what may be the instruction afforded in the several instances of sugar in the urine.

On the subject of treatment I do not propose to dwell to-night. If my views of the analysis of the causes of glycosuria are at all to be admitted, it must follow that the treatment of a subordinate glycosuria must be involved in the treatment of the major part of the case.

Not many years ago, when albumen was found in a patient's urine he was supposed to have Bright's disease. So now it is very often the practice to speak of the existence of a small quantity of sugar in the urine as justifying the use of the term diabetes. I think that those who have studied the question most thoroughly will agree with me that this is a most unwise use of the term; unwise as bearing alike upon prognosis and treatment.

Finally, I trust you will see that all I have put forward is rather analytical and suggestive than final or didactic. I wish to submit for your criticism, and to propose for your investigation, certain associations of glycosuria which have presented themselves to me, and to which I have devoted a good deal of thought.—Wm. M. Ord, M.D., F. R.C.P., in *Br. Med. Jour.*

REPORT OF THE SECOND HYDERABAD CHLOROFORM COMMISSION.

The experiments of the Committee were designed to show the effect upon the blood pressure, heart, and respiration of the inhalation of chloroform, ether, and the A. C. E. mixture, administered in various ways and under varying conditions. The objects of the Commission were five in number:—

I. To test the suitability and safety of chloroform as an anæsthetic. The experiments with ether and the A. C. E. mixture were instituted principally for the sake of comparison with chloroform on certain points, and it is not pretended that they afford a complete exposition of the action of those agents on the system.

II. The effect of pushing the above-named anæsthetics (*a*) to a dangerous degree, and more especially until the respiration ceases; (*b*) until death results.

III. The modifications in the effects of these anæsthetics which result from (*a*) asphyxia in varying degrees and produced by various means, (*b*) from the use of drugs such as morphine, atropine, physostigmine, and others.

IV. The reality or otherwise of the alleged liability during ordinary chloroform administration the occurrence of primary or secondary syncope or stoppage of the heart, brought about either by shock or through fatty or weak heart, or by hæmorrhage, or by changes in the position of the body. To investigate these points, in the first place a large number of operations which are reported to be especially dangerous in reference to shock were performed in every stage of anæsthesia, and numerous experiments were also made to show the effect of direct irritation of the vagus. Secondly, a number of animals were dosed with phosphorus before they were experimented on. This caused weakening of the heart by fatty degeneration of its fibres, but at the same time other complicated changes in the whole of the organs of the body not met with in the condition known as fatty heart in human beings. On the other hand, there are conditions often met with in the fatty heart, such as changes of the coronary vessels, which were not produced by the phosphorus.

V. The effect of the anæsthetics above mentioned upon different animals, more especially upon monkeys, as the nearest approach to human beings.

The conclusions to which the Commission has been brought by the study of these experiments are the following:—

(1) Chloroform, when given continuously by any means which ensures its free dilution with air, causes a *gradual* fall in the mean blood pressure, provided the animal's respiration is not impeded in any way, and it continues to breathe quietly without struggling or involuntary holding of the breath—as almost always happens when the chloroform is sufficiently diluted. As this fall continues the animal first becomes insensible, then the respiration gradually ceases, and lastly the heart stops beating. If the chloroform is less diluted the fall is more rapid, but is always gradual, so long as the other conditions are maintained; and however concentrated the chloroform may be, it never causes sudden death from stoppage of the heart. The greater the degree of dilution the less rapid is the fall, until a degree of dilution is reached which no longer appreciably lowers the blood pressure or produces anæsthesia.

(2) If the inhalation is interrupted at any stage, the fall of pressure still continues at a rate which depends altogether on the rapidity of the fall while the chloroform was being inhaled. This after-fall is probably due to absorption of a portion of the residue of chloroform in the air passages after the stoppage of the inhalation. In this way it often happens, if chloroform is given rather freely, that, though the respiration may be going on when the chloroform is discontinued, it afterwards stops.

(3) If the administration of the chloroform is stopped at an early stage, the pressure very soon begins to rise again, and gradually becomes normal; but if the chloroform is pushed further, there comes a time, not easy to define, when the blood pressure and respiration will no longer be restored spontaneously, although the heart continues to beat after the inhalation is stopped.

(4) If the fall has been very gradual, it may occasionally happen that the respiration stops completely, and still the blood pressure rises again, the respiration recommencing spontaneously in the course of the rise. In the same way, when the inhalation has been discontinued, the respiration may stop during the after-fall of the blood pressure and begin again spontaneously. As a rule, if the respiration has stopped, or even becomes slow and feeble at the time when the inhalation is discontinued, and artificial respiration is not resorted to, the fall in blood pressure will continue until death ensues.

(5) There are two conditions which frequently disturb the gradual fall of the blood pressure—viz., struggling and holding the breath,—and it is only by great care that they can be avoided in animals.

(6) Struggling, independently of any change in the respiratory rhythm, appears generally to raise the blood pressure. In one case of a dog much weakened from phosphorus the pressure fell every time he struggled.

(7) When struggling is accompanied, as it often is, by acceleration of the respiration and pulse, especially if the respiration is deep and gasping, it leads to a more rapid inhalation of chloroform, and consequently to a more rapid fall of blood pressure and a greater after-fall. In order to keep the chloroform cap or inhaler in its place during the animal's struggles, the administrator is obliged to hold it down more tightly over the nose and mouth, and this materially assists in hastening the rapidity of the inhalation, and consequently of the fall in blood pressure.

(8) The effect of involuntarily holding the breath —which, as anybody can prove by experiment upon himself, must happen when an inhaler saturated with chloroform is first applied to the face—is much more remarkable, the pressure often falling with great suddenness, while the heart's action is markedly slowed. As soon as the animal draws breath again, the pressure rises as suddenly as it fell, but the gasping respiration which succeeds then causes very rapid inhalation of chloroform, with immediate insensibility and a rapid fall of blood pressure, which quickly becomes dangerous.

(9) The combination of struggling with alternate holding the breath and gasping, which results if chloroform is applied closely to the face without sufficient dilution with air, causes violent fluctuations, and then a speedy fall of the blood pressure, which very soon leads to a dangerous depression with deep insensibility and early stoppage of the respiration. The after-fall under these circumstances is rapid and prolonged. It is this combination of events which causes struggling animals to go under chloroform so quickly.

(10) The effect of holding the breath may occasionally cause a temporary fall of blood pressure after the chloroform inhalation has been stopped, or even when the animal is quite out of chloroform. This fall is recovered from directly the animal breathes again.

(11) Slight continuous asphyxia, such as is produced by pressure on the neck by straps, a badly-fitting muzzle, or hindrance of the chest movements by the legs being too tightly bound down, gives rise to exaggerated and irregular oscillations of the blood pressure, and slowing and irregularity of the heart's action. If it leads to, or is accompanied by deep gasping inspiration, it is apt, like anything else which causes this, to increase the intake of chloroform and bring about a rapid decline of blood pressure.

(12) Complete or almost complete asphyxia, as by forcibly closing the nose and mouth or closing the tracheal tube after tracheotomy, has an effect similar to, but more marked than, that produced by holding the breath, and the character of the trace corresponds precisely to that produced by irritation of the peripheral end of the cut vagus. The pressure falls extremely rapidly, sometimes almost to zero, and the heart's action becomes excessively slow, or even stops for a few seconds. If the Fick trace of Experiment 148 be compared with the photographic reproduction of Trace A of the Glasgow Committee, it will be seen that they are identical, and that the slow action of the heart with great fall of pressure, which the Glasgow Committee attributed to some capricious action of chloroform upon the heart, was undoubtedly due to asphyxia.

(13) This effect of asphyxia is the result of stimulation of the vagi. The proof of this is (*a*) that the trace corresponds exactly, as stated above, to that produced by direct irritation of the vagus, (*b*) division of both vagi entirely abolishes it, and (*c*) the administration of atropine which paralyses the vagus also abolishes it.

(14) In Trace 158 (Fick 4), which was taken during asphyxia after a full dose of atropine, it will be seen that there is an alternately slow and rapid pulse according to the phase of the respiratory movement, but no continued slowing of the heart as in vagus irritation. But there was still a distinct fall of pressure after the atropine when the breath was held, and it was thought that the slowing of the pulse above noted in this condition might be due to the disturbance of the heart from tension in the pulmonary vessels in the absence of respiratory movement, rather than to irritation o the vagi. To test this point Experiment 184 wa instituted. In this experiment the dog's che was forcibly inflated with bellows connected by tube with the trachea, and the effect of this pr ceeding was to cause a fall of pressure and slow ing of the heart exactly the same as involunt holding of the breath. The dog was then poison with atropine, after which inflation of the ch

still caused a fall of pressure, but without slowing of the heart. The fall of pressure must be in some degree independent of vagus irritation, which, however, usually accompanies it.

(15) It only remains to be considered whether the slow action or temporary stoppage of the heart with great fall of pressure produced by vagus irritation is in itself an element of danger in chlorform administration, and if it is not, wherein the danger actually lies.

(16) The experiments in which deliberate irritation of the vagi was carried on during anæsthesia show unmistakably that irritation of these nerves diminishes rather than enhances the danger of anæsthetics. The effect upon the heart is never continuous, and as the vagus becomes exhausted, or when the irritation is taken off, the blood pressure rises again, as it does when the same result is produced by asphyxia. The slowing of the heart and circulation which is produced by irritation of the vagus by any cause, such as holding the breath in chloroform administration, retards the absorption and conveyance of chloroform to the nerve centres, just as holding the breath, whether voluntary or involuntary, prevents chloroform from entering the lungs; and of itself slowing or temporary stoppage of the heart in chloroform administration is not dangerous,

(17) To answer the second part of the last question in Paragraph 15 is easy enough, if it is kept in mind that the effect of vagus irritation upon the heart is never continuous; and in chloroform administration, as the pressure rises again after the slowing of the heart and temporary fall of pressure produced by any form of asphyxia, violent respiratory efforts with bounding heart's action lead, as in the case of struggling, to a rapid and dangerous inhalation of chloroform, and consequent rapid and dangerous decline in blood pressure It is, in fact, the temporary exhaustion of the vagi after stimulation that is to be feared, and not the actual stimulation as long as it is continued.

(18) In accordance with this fact, it will be found that in chloroform administration neither holding the breath, even if involuntary, or vagus inhibition can be kept up beyond a certain time; and if the chloroform is not removed from the face, one or both of two things may happen: (*a*) when the animal breathes again, it takes deep and gasping inspirations, the lungs become filled with hloroform, and an over-dose is taken in with exeme rapidity; or (*b*) when the restraining inence of the vagus is taken off the heart, through e irritation ceasing or the nerve becoming exausted, the heart bounds on again, and the rculation is accelerated in proportion. The blood en becomes quickly saturated with chloroform, d an over-dose is at once conveyed to the nerve tres. The theory which has hitherto been acted is that the danger in chloroform administration consists in the slowing or stoppage of the heart by vagus inhibition. This is now shown to be absolutely incorrect. There is no doubt whatever that the controlling influence of the vagus on the heart is a safeguard, and that it is the exhaustion of the nerve which is dangerous.

(19) It can be readily understood how a condition in which the pulse is rapid and bounding, with high blood pressure, leads to more rapid absorption of chloroform from the lungs, and a more rapid propulsion of the chlorformed blood to the medulla oblongata, and consequently to a more rapid paralysis of the respiratory and vaso-motor centres and precipitous fall in the blood pressure. Such a condition is produced in some cases by ether or by division of both vagi or by a full dose of atropine. Not only is the poisoned blood carried more swiftly to the vital centres in these cases, but added to this there is the fact that, as the heart is already doing its utmost before the chloroform is given, it is unable to stave off by increased work the fall in pressure that occurs when the vaso-motor centre is paralysed. On the other hand, it seems clear from Experiment 92 that the direct action of chloroform upon the heart's substance is not the cause of the fall of pressure that occurs when it is inhaled.

(20) In Experiment 92 repeated injections of 20 minims of chloroform were made into the jugular vein, and its effect was not to paralyse the heart, but to produce anæsthesia and a gradual fall of blood pressure exactly as if the chloroform had been inhaled. In Experiment 72, after a considerable amount of ether had been injected into the jugular vein, and a bounding condition of pulse had been produced, the effect of injecting chloroform into the jugulars was much greater, and the fall of blood pressure much more rapid and dangerous, than in the case when chloroform alone was injected. Granting, then, the truth of Ringer's conclusions from experiments on the frog's heart (which have now been repeated and confirmed by the Commission) that chloroform has a gradual paralysing effect upon the heart's tissue, we must conclude that such an effect, in the degree in which alone it could occur in the practical inhalation of chloroform, would rather be a source of safety than of danger.

(21) The Committee discussed the advisability of cutting the vagi some time previously to experimenting on the blood pressure with chloroform. The effect of this procedure is to cause continuous rapid action and tendency to exhaustion of the heart, as well as to degeneration of the terminal branches of the nerves in the heart if the animal live sufficiently long. Such experiments might be of some interest theoretically, and also have had a practical bearing upon the condition of the heart in certain cases of chronic alcoholism; but the Committee decided not to perform them, as it con-

sidered the end to be gained did not justify the pain they would have inflicted.

(22) In experiment 178, the case of a dog that had had morphine, remarkable slowing and even temporary cessation of the heart's action occurred again and again at the same moment as the respiration stopped, but the heart invariably recovered itself, and began again to beat regularly before any steps were taken to restore the animal, and without any respiration occurring. We find in this case that it was possible to restore the animal even after unusually long intervals had been allowed to elapse between the cessation of the natural and the commencement of artificial respiration. The failure of the heart, if such it can be called, instead of being a danger to the animal, proved to be a positive safeguard, by preventing the absorption of the residual chloroform and its distribution through the system.

(23) The effect of artificial respiration after the natural respiration has ceased is to cause an alternate rise and fall of small amount in the blood pressure, the trace thus formed upon the drum being a coarse imitation, altered somewhat by the shaking of the table, of the natural respiratory cure. The difference consists chiefly in the fact that the artificial rise and fall are more abrupt than in natural breathing, and that the rise always coincides with expiration or compression of the chest. After artificial respiration has been continued for a certain time, the blood pressure begins to rise again, and a little later natural respiration returns.

(24) The effect of artificial respiration in restoring an animal after the respiration had stopped was always marked. In a few exceptional cases, such as experiment 159, a phosphorous dog, and Experiment 142, a horse which had an enormous over-dose, although the the artificial respiration was commenced as soon as possible after the breathing was noticed to have stopped, it was not successful.

(25) Complete stoppage of the respiration always means that an over-dose has been administered, and the over-dose may have been so great as to produce a very prolonged after-fall of blood pressure, and may thus render restoration impossible. As it is impossible to say whether, after chloroform has been pushed and then discontinued, the respiration will be restored spontaneously or not, so it is never in any case certain that artificial respiration will restore the natural respiration and blood pressure, no matter how soon it is commenced after the respiration stops. A great deal depends upon the amount of the after-fall; in some cases, even after the respiration has been restored, the pressure continues to fall and respiration again ceases, and artificial respiration then fails. We thus find respiration restored by artificial respiration while chloroform is still being absorbed, and this tends to show that artificial respiration does not merely pump the chloroform out of the blood, but exerts considerable influence in exciting the natural respiration.

(26) The time which elapses before artificial respiration succeeds in restoring natural respiration varies very greatly. In one case, Experiment 116, it was continued for eleven minutes before the first natural gasps commenced. This period is undoubtedly prolonged in some cases by a condition of physiological apnœa, which renders it unnecessary for the animal to breathe. Consequently, whenever the pressure rose considerably during artificial respiration it was stopped, and the animal then generally breathed after a few seconds.

(27) The time which may be allowed to pass with impunity before commencing artificial respiration also seems to vary considerably. This point was not particularly attended to in the manometer experiments except in Experiments 162 and 178, which were instituted to test the truth of the opinion formed by the sub-committee that morphine had some slight action in impairing the efficiency of artificial respiration. In these cases the commencement of artificial respiration was postponed for more than two minutes after respiration ceased, and was successful; but this is certainly far above the average interval that can be allowed with safety. The success of artificial respiration in restoring the blood pressure is in some cases very remarkable; *vide* especially Experiment 40, in which the heart had apparently ceased beating, and the dog was believed by everyone present to be dead, and yet recovered with artificial respiration. The success in this instance is due to the fact that chloroform had only been administered for a few seconds, and that the depression was the result, not of continuous chloroform administration until respiration ceased, but of a long and severe after-fall.

(28) It corresponds to those cases, which are so often reported, in which dangerous failure of the heart is said to have occurred some minutes after the administration of chloroform had been discontinued, and which are sometimes restored, and sometimes not, by artificial respiration. There is nothing at all sudden about the failure of the heart in these cases, but the attention of the chloroformist which has been wandering, is suddenly called to the fact that the patient is apparently dead. When the animal was really dead, it was found in some cases that artificial respiration still maintained a small amount of mean pressure in the manometer. In others the pressure seemed to fall to the zero line between each compression of the chest.

(29) The dangers of too vigorous artificial respiration were illustrated in some of the accidental deaths. In one case the liver was badly ruptured and in another the pleural cavity was filled wit

blood. In three cases—Experiments 80, 92, and 103—rhythmical movements of the diaphragm were noticed after the heart had ceased beating and after the chest had been opened. It is remarkable that in two of these cases the splanchnic nerve had been divided. The third was a case in which chloroform had been injected into the jugular vein, and in this case there was a synchronous movement of the jaw as well. In all, death and stoppage of the heart had occurred gradually, and in Experiment 103 the heart was still irritable. These movements cannot be called respiration; though the last gasp of a dying animal, that ineffective jerk of the diaphragm, which is such a fatal symptom, is very likely in many cases a movement of the same character Similar movements, which were continued much longer, occured in Experiment 104, after the thorax was opened, while the heart was still beating. Still more remarkable convulsions of the muscles of jaws, ears, and fore-feet occurred in Experiment 167, in the case of a dog that had been poisoned with nicotine. These movements continued at regular intervals for more than ten minutes after death, and were sufficiently forceable to jerk the handles of a pressure forceps fixed on the end of the tongue off the table at each spasm. In a rabbit, in Experiment 153, the auricles of the heart continued to beat rhythmically for three hours after it was supposed to be dead from chloroform and its thorax had been laid open. Irritability of the heart after death was noticed in many cases, but seemed to be most marked in cases where ether had been used.

(30) Chloroform injected into the heart through the jugular vein did not cause clotting of the blood, as was the case when ether was injected.

(31) In the course of the experiments of the Committee various drugs were administered in order to ascertain if they had any effect in modifying the action of chloroform. The result showed that none of them had any effect in preventing the typical descent of the blood pressure that occurs when chloroform is inhaled. Atropine, when given in a dose sufficient to paralyse the vagi, of course prevents the action of those nerves in asphyxia, and by increasing the action of the heart it appears to cause a more rapid descent in the blood pressure when chloroform is inhaled, as has been already explained. Morphine appeared in Experiment 162 to render the rise in blood pressure that occurred when the chloroform was discontinued slower and less complete, and to bring about a more or less permanent condition of anæsthesia. It may be noted that the animal used in this experiment was a monkey; and in other experiments with monkeys, when no morphine had been given, it was remarked that the animal, after a few inhalations of chloroform, would often lie quite quiet in a state of semi-insensibility for a long time without further inhalations; still this condition was much more marked in Experiment 162 than in any of the others. No action of this kind was noticed in the dog in Experiment 178, but other experiments (90 and 94) showed that pariah dogs are very indifferent to action of morphine, and it is probable that the dose of morphine in this case was insufficient to bring about the condition noted in the monkey. The peculiar behavior of the heart in Experiment 178 was not the result of the previous administration of morphine, for a similar phenomenon had occurred in other cases (49 and 60) in which no morphine had been given. Experiments 162 and 178 prove conclusively that morphine has no effect in shortening the period that may be allowed to elapse between the cessation of natural respiration and the commencement of artificial respiration.

(32) The other drugs used had no effect upon the action of chloroform except when their own special action became the leading feature in the case—as, for instance, during the vomiting from apomorphine (Experiment 104, Fick 9) or the convulsions produced by nicotine (Experiment 167).

(33) In order to test the alleged danger from shock during chloroform administration, the Committee performed a very large number of those operations which are reputed to be particularly dangerous in this connection—such as extraction of teeth, evulsion of nails, section of the muscles of the eye, snipping of the skin of the anus, etc. In many cases the operation was performed when the animal was merely stupified by the chloroform and not fully insensible. In such cases a slight variation in the blood pressure would sometimes occur, such as one would expect from the irritation of a sensory nerve or from the struggling that ensued, but in no case in any stage of anæsthesia was there anything even suggestive of syncope or failure of the heart's action. In thrusting a needle into the heart, there was often a momentary but well-marked fall of blood pressure; but even this was absent in all other injuries. If chloroform really had any power to increase the tendency to shock in operations, it is impossible to believe that it would not have been manifest, to some degree at least, in one or other of these numerous experiments. The Commission was, however, not content with this negative result, and determined to ascertain the effect of direct irritation of the vagi during continued chloroform administration. The result of such experiments (65, 117, and others) proved that inhibition of the heart's action prevented, rather than assisted, the fatal effects of prolonged chlororform inhalation. An animal that was put into a condition of extreme danger (from which it could only be restored by means of artificial respiration) by inhalation of chloroform for one minute recovered spontaneously and readily after five minutes of

chloroform inhalation, together with inhibition of the heart by electricial irritation of the vagus carried on simultaneously. In one of these experiments (117), chloroform was pushed for seven minutes; and during continued irritation of the vagus the animal repeatedly came round without artificial respiration. The danger really begins when the irritation is discontinued or fails to inhibit the heart, and thus enables the chloroform in the lungs to be rapidly absorbed and thrown into the system. The danger is certainly increased by deliberately pumping the chloroform into the lungs by means of artificial respiration, for animals in which this was done, although they showed a tendency to recover when the chloroform and irritation of the vagus were discontinued, afterwards died rapidly.—*Lancet.*

To be continued.

THE VALUE OF THE NEW ANTISEPTIC ARTIFICIAL MEMBRANA TYMPANI.

The following remarks are intended as a reply to the short criticism which appeared in this journal for November last.

During the past twelve months I have extensively employed in my aural practice the new antiseptic artificial membrane, with excellent results.

In many cases of chronic middle-ear disease marked improvement has followed its insertion into the meatus, but the most striking successes have always occurred in patients laboring under perforation of the membrana tympani. I have tested the value of my artificial drumhead in 130 cases of this disease, and, with only five or six exceptions, the results were extremely satisfactory. I have found it sometimes useful in cases of accommodative loss from alterations in the contents of the tympanum, in which the Eustachian tube was unobstructed and the naso-pharynx fairly healthy.

The immediate improvement in the hearing-power is often a matter of much satisfaction. The intensity of the sonorous vibration is at once increased, and sounds can be clearly defined which before appeared to be only confusion. The sensibility of the organ is magnified, and the sense of hearing is so much changed that the patient does not appear deaf during ordinary conversation. The hearing distance is remarkably increased, and, in place of earnest looks and strained attention, the countenance expresses both pleasure and repose. Several patients have informed me that, with the assistance of the artificial membrane, sounds had been rendered audible which they had lost for many years. Others laboring under perforation, but without serious deafness, have used them as ear protectors with great comfort. In such cases the artificial drum-head forms a screen between the middle ear and external meatus, and acts as an efficient shield during exposure.

Sometimes good results can be obtained by simply adjusting the artificial membrane and replacing it as often as necessary. But, in a large majority of cases, perforation of the tympanic membrane is associated with chronic suppurative disease of the middle ear, so that other important remedial measures must be diligently practised, and the ear must always be thoroughly deodorized before the introduction of the artificial drumhead. I always tell my patients that they may hope for progressive improvement, but that they must not expect to realize the full amount of relief until they have regularly carried out the local treatment and worn the membrane for two or three months.

During the last half-century a large number of artificial drum-heads have been introduced by different surgeons, and probably all of them have been found more or less useful in suitable cases; but not one of these devices has obtained a wide and general adoption. The ordinary cotton pellet has been extensively recommended by aurists, but it is my experience that few patients can be induced to persevere with it, because it is so liable to get out of position, and requires so much dexterity in putting it in and taking it out of the meatus.

On the other hand, the new antiseptic artificial membrane presents many practical advantages.

1. It decidedly improves the hearing-power for distance and conversation, and this appears to be due, at least in some measure, to its peculiar shape.

2. It is especially adapted for self-application, and can be easily placed in the right position and readily removed.

3. It is extremely light, and causes no sensation or irritation in the meatus by its presence.

4. It is serviceable as an efficient ear-protector, and acts as a screen for maintaining the moisture of the exposed tympanic cavity.

5. It is manufactured in different sizes, to suit the varying capacity of the external ear, and when once placed in position it is not liable to displacement.

6. It is obtainable at a trifling cost, so that a new artificial membrane can be used as often as necessary.

The following table exhibits twelve cases of perforation of the membrana tympani treated with the new artificial membrane:

No. of case.	Age.	Sex.	Disease.	Hearing: Before treatment.	Hearing: After treatment.
1. S. H. private patient.	16	F.	Perforation of both ears involving almost entire membranes; discharge copious and fetid.	Very deaf, conversation difficult at one yard.	Progressive improvement; conversation easy; can follow sermon at church.
2. E. T. under care of Dr. J. Green, Sandport.	24	F.	Double perforation, caused by scarlet fever in early life; discharge fetid but scanty.	Sense of hearing extremely defficient; understands by lip movement.	No apparent deafness after two months' treatment; musical sounds loud and clear.
3. R. E., a medical man.	36	M.	Perforation on right side; no discharge for some years.	Hearing very deficient on right side.	Great improvement. Wrote in July, 1889, "my hearing is now restored."
4. K. P., Infirmary patient.	12	F.	Perforation of both membranes; disease of ears followed typhoid fever three years since; chronic naso-pharyngitis and fetid otorrhœa.	Mother states that she could only hear conversation in a loud tone, at the distance of one yard.	After treatment for *one month*, conversation easy; can hear tick of clock and sermon at church.
5. M. S. Dr. Hunter, Gosport.	30	F.	Large perforation for many years followed scarlet fever; otorrhœa profuse.	Deafness variable; but always "very hard of hearing."	Ears deodorized and drums inserted; can converse without difficulty; seen after three months; hearing much improved.
6. J. L., Dr. R. Emmett, Sandport.	44	F.	Perforation both membranes; no discharge.	Very deaf twenty years.	Hearing much improved. Patient said; "With drums I can hear well; I change them twice a week."
7. N. T., Dr. Axford, Southsea.	24	F.	Extensive destruction of membranes; fetid discharge and aural polypus.	Very deaf from twelve years of age.	Recently married, Oct. 1, 1889. Husband wrote: "I am delighted with the remarkable improvement in my wife's hearing."
8. L. S., Infirmary patient.	17	F.	Perforation both ears; copious and fetid discharge.	Hearing very deficient for three years.	Very much improved; can hear comfortably at church and in conversation.
9. E. G., Dr. R. Emmett, Sandport.	66	F.	Perforation of many years duration.	Very deaf; had used ear trumpet for years.	Hearing much improved, has discarded the trumpet.
10. T. W., a medical man.	24	M.	Perforation of right entire membrane; mastoid abscess; six years since an operation for drainage followed by great relief.	Hearing very imperfect on right side.	Wrote Sept., 1889: "I find great comfort from the artificial membrane and hearing much improved."
11. S. K., Dr. Woodward, Ryde.	22	F.	Perforation of both membranes since five years; caused by scarlet fever; very fetid discharge.	Very deaf; conversation difficult at at one yard.	Conversation easy. She said, Nov. 1st, 1889: "The membranes are a very great help and keep out the cold air."
12. S. F., (private patient), Gosport.	74	M.	Large posterior perforation, right membrane; left membrane white and puckered; no discharge.	Lost hearing on right side for many years; left very imperfect.*	Immediate improvement by insertion of artificial membrane. Nov. 10, 1889, stated: "My right ear is now very useful, and my hearing much improved."

*Patients have often told me that they had lost all sense of hearing on the side of the perforation, and have expressed surprise at the effect of the artificial tympanic membrane.

—JOHN WARD COUSINS, M.D., Lond., F.R.C.S., in *Am. Jour. Med. Sci.*

A FEW PRACTICAL REMARKS ON CONTINUED SLIGHT FEVER.

The use of the clinical thermometer in acute disease is universal, and the value of its indications for diagnosis, prognosis, and treatment is universally appreciated. But there is reason to think that in chronic disease its use is far from being as general as it should be. Reference is not made now to cases which are accompanied by marked pyrexia, such as those of phthisis, where of course the thermometer is daily used by all.

There are many cases of failure of general health attended with decided weakness and gradual loss of flesh and color, but without sufficiently marked local symptoms or evident febrile action to justify the considerable disturbance of general health. Such cases naturally give rise to the suspicion of some incipient, deep-seated organic disease. In many of them it will be found that the temperature, taken at various times in the day, exhibits abnormalities, showing that there is a slight febrile action which contributes largely to the injurious effects upon the general health. The only local symptoms to be detected in such cases may be a slight looseness of the bowels, due to some limited intestinal catarrh; or a slight local tenderness scarcely complained of by the patient, due to some local congestion or irritation. Or, again, there may be only vague pains which suggest a rheumatic element.

For instance, I was consulted last winter by a gentleman, 62 years of age, who had been for five months gradually losing strength and flesh despite careful treatment by a skilful physician. There was marked rapidity of heart action, the pulse constantly being 100 or upward. I found that his temperature rose at some part of each day from 99⅖° to 100⅗°, and, on inquiry, learned, that each day for a year there had been semi-solid or even less consistent evacuations, at times amounting to two or three in the course of the day, a condition of things which he viewed with great complacency, and had never complained of to his physician. He was a very active business man, taking a great deal of exercise, and exposing himself considerably in driving about. The recognition of this febrile element, evidently symptomatic of an intestinal catarrh, which in his overtaxed and sensitive state of health induced the slight fever, led me to confine him to bed, and to restrict his diet, and to use remedies directed to the relief of the intestinal condition. He took for some time a pill of nitrate of silver gr. ⅛, and extract of opium gr. $\frac{1}{10}$, thrice daily, with an injection of sulphate of zinc gr. ½, in an ounce of water, and with the addition of deodorized laudanum, from 5 to 12 drops, according to the degree of looseness shown by the first movement in the morning. Improvement gradually followed, the temperature after some weeks descended to normal, and the pulse-rate came down with it, and he has regained good health.

In another case which I have just seen, a young man of 35, has for six or seven years been in poor health, obliging him to spend the winters in Florida, and to abandon his profitable business in the West. His habits are rigidly careful and proper. He has been repeatedly examined by various physicians without any sufficient cause being detected for the weakness and loss of flesh; he formerly weighed 155 pounds, his present weight is 131 pounds. At no time has any lesion of the lungs been found, nor has there been any cough, though naturally fears of incipient disease have been entertained. The circulation has been constantly excited, the heart's action easily accelerated, and some shortness of breath produced by exertion. He has already noticed that on some occasions he would have sub-normal temperature in the evening. I found his morning temperature 99⅕° to 99¼°; at 2 p.m., 99⅗° to 100°; at 7, 8, 9 and 10 p.m., 97⅖° to 97⅘°. It was manifest that this was an abnormally wide range of temperature, with a maximum, it is true, not very much above the normal, but still, when taken in connection with the sub-normal minimum, showing a distinct, though slight febrile movement. Careful examination of every organ revealed nothing abnormal until the region of the gall bladder was reached. Here there was tenderness and circumscribed dulness on percussion, probably showing distention of the gall bladder, and a catarrhal state of the gall ducts and duodenum. There can, I think, be little doubt, that this irritative condition has been maintained for a long time, and having been associated with a slow pyrexia, has gradually produced the serious effects upon his general health above described. It is difficult to say why, in some cases, such slight lesions induce fever, when, in many instances, this would be entirely wanting. There must be a wide difference in the susceptibility of individuals to febrile action, due possibly either to the different degrees of facility with which their vital chemistry is disturbed, and irritating ptomaine are developed, or with which irritating organisms of substances from without gain entrance in spite of the resisting power of their protoplasm.

Another interesting case presented itself at the University Hospital a few days ago in the person of a man aged 40, who had been a hard drinker, and of course, much and often exposed. He complained of weakness, was easily put out of breath, and had pains about the left shoulder, scapula, and pectoral region. The bowels were disposed to be loose. The temperature was 100° at noon. Of course the suspicion of a walking case of typhoid fever was entertained, but careful examination showed it

confirmatory symptoms. The condition had then lasted apparently for six weeks, and a week later when he retured, his digestion was in much better condition; there were still pains about the left shoulder, with stiffness of that joint, and his temperature was 100 1/5°. A week later, he returned relieved of the pains, with his digestion in good condition, but still with a temperature of 100 1/5°. The circulation throughout had been excited, and during my examination the pulse was quick and irritable, and from 124 to 130 to the minute; the radials felt somewhat hard; the first sound of the heart was somewhat blurred, but without distinct murmur. The result of a careful examination of all other parts of the body was negative, as throwing light on the cause of fever. It seems highly probable that in this case an irritative action which may possibly be called rheumatoid in type, has been affecting the fibrous tissues, but I suspect especially involving the walls of the vessels, that a diffuse endarteritis is threatened. We know how frequently arterial changes develop gradually in those subjected to such causes as this man has been, and we constantly recognize the lesions when they have advanced to a high degree, and when of course they are irremediable. But there is an incipient-forming stage, when the vascular changes are neither extensive nor profound. They are not yet associated with those secondary degenerative changes of sclerotic type which we later recognize, not only in the vessels, but equally in the cardiac walls and in the kidneys. It is true that the diagnosis is based chiefly upon exclusion and upon presumptive evidence. When, however, there are such symptoms as were present in this case—slight continuous elevation of temperature, disproportionate excitement of the circulation; alteration in vascular tension; fugitive and radiating pains; weakness; dyspnœa on effort; occurring in a patient of gouty diathesis, or in one who has been much exposed, or addicted to alcoholic excess; and when critical search fails to reveal any adequate local lesion, it is justifiable to suspect an early stage of diffuse endarteritis. I have much pleasure in this connection in referring to a highly valuable and suggestive paper upon this subject by Dr. Arthur F. Meigs.

I have long been in the habit of looking out for the existence of this condition in cases analogous to the one here reported; and not only have I often been led to suspect its presence, but I believe that by the institution of prompt, rigid, and long-continued treatment, the development and course of the disease have been powerfully modified. If I could gain control of this man I would confine him strictly to bed until all fever had been absent continuously for some time, in the hope that if this were attained, the excitement of the circulation would subside, and that his impaired general health would be improved, if not restored to its former tone. If complete rest in bed were not attainable, the most rigid and minute enforcement of hygienic rules should be insisted upon. I should advise the application of repeated small blisters over the præcordia, the aortic area, and the course of the large arteries. When practicable, the use of hot sulphur baths is of service, or interrupted courses of mercurial inunctions may be prescribed. Internally the most useful remedies are:

℞.—Sodii salicylatis, ... ℥ ss.
Potassii iodidi, ... ℥ ij.
Tr. aconiti radicis, ... gtt. lxxij.
Aquæ cinnamomi, . q.s. ad f ℥ vj.—M.

Sig.—From one to two teaspoonfuls in water three times daily.

or else a prolonged course of small doses of Donovan's solution (liq. arsenici et hydragyri iodidi, gtt. ij.—v. t. d., p. c. in water) with aconite or veratrum; or after the process has lasted some time and the vascular tension is lessened, with digitalis.

In cases marked by anæmia or atony, a combination of small doses of iodoform (gr. 1/8 to gr. i), with pil. ferri barb. (gr. 1/2 to gr. ij.) has proved very valuable in allaying excitement of circulation, and as an alterative tonic. The urine should be closely watched, not only to detect incipient renal change, but in order that its character may guide the direction of the diet, which in such cases always demands careful attention. It seems impossible to lay down fixed rules, since in each case the state of primary digestion and ultimate assimilation must be considered. It must be understood that in order to counteract the progress of endarteritis, a very prolonged course of treatment, general and medicinal, will be needed.

These remarks upon slight fever of a continued type, are offered in the hope of directing attention more closely to the frequency of its occurence in chronic conditions, and to its great importance as an aid in diagnosis, and as a guide in treatment. —Wm. Pepper, M.D., in *Univ. Med. Mag.*

THE DOCTOR AT HOME.

Query: Is the Doctor sufficiently at home? Does he arrange his affairs in a manner to permit him to properly perform the duties connected with his home? Is he not apt to be overcome by the responsibilities of his life; to become so devoted to the performance of his duties to his patients, that he neglects his duties to those who in the mind of every good citizen, should be first—the members of his own family? Is there any other class of persons in the community which so completely ignores the demands of home as the doctors?

The habits of life of the physician naturally make him unsystematic; his duties as he advances

in his profession become burdensome and exacting; the calls upon his time from his patients are continuous, never ending, almost. Then if he properly equip himself so as to perform his duties to his patients, the demands upon him in the direction of study are great, and the ones most apt to be neglected are the members of his own household. Too often he neglects his finances and at the same time neglects wife and children unintentionally, but simply for the reason that he thinks the necessities of his calling demand it.

A doctor's wife of my acquaintance, made the observation on one occasion that she thought a physician's wife should have two husbands, one to attend to his patients and his business and the other to look after the interests of his family. Probably she was right, but there might be a conflict under these conditions between the two regarding their respective duties.

Does not the trouble lie in the fact, after all, that the members of the profession do not study how to perform their work in the easiest manner for themselves and for the good of all concerned? Might they not better be more exacting in the regulation of their hours; might they not educate their patients in the direction of being more considerate? Of course when sickness enters the average home it paralyses all concerned, and at once the doctor is wanted, and *wanted at once.* If, however, the patients should be properly impressed with the fact that the doctor has rights which ought to be respected, they would stop to think now and then and say: "Can I not arrange my summons for the doctor in a way that he may receive it early in the day, so that his calls may come in such a manner as to enable him to map out his work for the day?" If they were properly reminded of the necessity for sleep on the part of the doctor, might they not frequently send their calls in at an earlier hour, in the day so that they might be made by daylight rather than towards midnight? If the patients be impressed with the fact that the doctor must have sleep and rest and a little time to devote to the pleasure of his family, and this were emphasized by an announcement that all calls received after dark should be charged for at double price, the result might be attained.

Many of the discomforts of a busy doctor's life might be avoided were he to make the proper efforts to study his own interests and to teach his patients to have some regard for his comfort.

He who has no regard for himself will find the world neglectful and wanting in respect for him. A generous consideration for humanity should demand from the physician a selfish watchfulness of the interests of the mechanism through which he serves suffering man.—*Medical Mirror.*

ANTIFEBRIN AS A HYPNOTIC FOR CHILDREN.—Amongst the many hypnotics which at present are being so liberally supplied by the chemists to the medical profession, it is well not to lose sight of the value of antifebrin in certain groups of cases. Although the drug suggests more that its action is to hinder the development of febrile condition, or when that condition exists, to lower the temperature, still in many cases in my practice it has proved a valuable hypnotic and analgesic. Its value has been most evident in cases of bronchopneumonia, croupous pneumonia, and bronchitis, and that more especially in cases where children have been the sufferers. The marked relief which has frequently followed its administration has in many cases been extremely gratifying. Cases of fretful insomnia of the young, possibly partially caused by pain, fever, or general *malaise* have been speedily relieved by the drug, and from six to eight hours of refreshing sleep have been induced. After sleep the awakening was natural, there being no excitement nor confusion of thought. There was no period of excitement observed before the drug took effect. Along with the onset of sleep there was a fall of temperature, frequently a copious perspiration, at the same time the respiratory acts were slowed and the pulse-rate diminished. In no case have any evil effects been noticed, although the success of the drug induced its employment in a large number of cases. The need of a safe hypnotic for children, such as antifebrin seems to be, will, I think, be readily appreciated, the number of cases where it is required being unfortunately very large. It is still further enhanced as a serviceable drug for children by the fact that it is comparatively tasteless, and also by the smallness of its dose; the dose being from two to five grains, depending of course on the age of the child. A useful way of prescribing it, I have found, is to place the powder on the dorsum of the tongue either alone or mixed with a little powdered sugar. It might also be given in the form of a mixture—the drug being insoluble in a watery menstruum—suspended by the aid of mucilage and sweetened by any of the various flavoring syrups. There is yet another important advantage in hospital and general practice over many recently introduced hypnotics, in the comparative cheapness of the drug.—John Gordon, M.D., in *Br. Med. Jour.*

THE CHOLERA BACILLUS.—Professor Nussbaum, recently speaking on this subject, said: "Since Koch discovered the cholera comma bacillus it has come to be known that no human being living at the place where the epidemic rages escapes this poisonous fungus, for it is in the air we inhale, in the water we drink, upon the food we eat. It is in the soil, and when this is moist and unclean multiplies with extraordinary rapidity. In spite of this fact, in a city of, say, 200,000 persons visited by cholera, perhaps but 1 per cent., the

is, 2,000 will be attacked. The other 180,000 persons remain unimpaired in health, although they have all inhaled, swallowed and drunk the the cholera bacillus. It is known with certainty that the cholera bacillus is dangerous to those persons whose stomach is not in a healthy state, and jeopardises life only when it passes into the intestines. A healthy stomach will digest the bacillus, and therefore it does not reach the intestines in a living state. It will be remembered that Koch succeeded in imparting cholera to guinea-pigs by using opium injections (into the abdominal cavity) and giving the comma bacilli, with soda solution in the food. Of thirty-five guinea-pigs thus experimented on thirty died with the characteristic symptoms and post-mortem appearance of cholera, whereas a large number that received the cholera bacilli alone remained healthy. In most infective diseases it has been shown that the presence of the specific germ is only one element in the causation. A particular condition of the receptive organism is equally essential.—*Br. Med. Jour.*

THE TREATMENT OF HEPATIC JAUNDICE BY HYPODERMIC INJECTIONS OF PILOCARPINE.—Witkowski considers pilocarpine as almost a specific in the treatment of jaundice. Two years ago, he writes (*Bulletin Général de Thérapeutique*), that he had under his care a patient affected with nephritis, complicated with biliary calculi, enlargement of the liver, jaundice, ascites, and dropsy of the legs. This patient was 45 years of age, and seven years previously, during the progress of a pregnancy, she commenced to suffer from pains in the right side, which greatly increased after delivery, and were accompanied by the development of jaundice. Treatment by Carlsbad waters produced somewhat of an improvement, but the jaundice as well as the hepatic colic returned regularly at each menstrual period. This condition continued to increase in severity for a period of four years, and when she first came under the care of the author her condition was extremely serious. Two injections of pilocarpine (half a syringeful of a two per cent. solution) produced notable relief. Hepatic colic disappeared completely, even although morphine had previously proved inefficacious and the liver became less painful to pressure. Under the influence of injections of ⅛ of a grain of pilocarpine, administered once or twice daily for three weeks, the jaundice, as well as the hepatic pain and the enlargement of the liver completely disappeared. For three years the patient remained perfectly well, and the author states that he has treated thirty analagous cases in a similar manner, in every instance with the most satisfactory results. He notes, however, that the treatment was inefficacious in cases of jaundice resulting from tumors of the liver, and makes the statement that when in doubtful cases if pilocarpine, employed from ten to sixteen days, does not cause the diappearance of jaundice, the conclusion may be positively formed that the case is one of a malignant nature. He, therefore, recommends the use of pilocarpine in all cases of jaundice, provided the condition of the heart will permit.—*Therap. Gaz.*

THE TREATMENT OF ANAL ECZEMA.—It is a well-known fact that eczema about the anus and genitals of both sexes frequently resists all the well-known remedies that speedily cure the same affection on other portions of the skin. According to Unna (*Monatshefte f. praktische Dermatologie*), this obstinacy to treatment is attributable in part to the proximity of the disease to a mucous surface and its irritating discharges; in part to its rich supply of nerves, rendering itching so pronounced a system that scratching and its effects make most of the remedial applications useless; finally, because of the difficulty in applying remedies to this region.

The majority of such cases may be cured by the application of well-adapted bandages to which lotions or ointments have been applied, by cauterization with carbolic acid or corrosive sublimate, the use of cocaine, or especially with fomentations of very hot water.

When, in spite of all these remedies, the eczema becomes aggravated, the skin assuming, through the growth of connective tissue and epithelial proliferation, a cicatricial and warty appearance, the itching becomes unendurable, and the patient, from loss of sleep, physically and morally weakened, one should not hesitate to resort to local or general anæsthesia, and with a broad Paquelin cautery slowly burn the affected parts, so that, were the proper remedies not applied immediately, a burn of the second degree would result.

Before the anæsthesia is over, apply either a five per cent. solution of borax, with or without the addition of cocaine, Carron-oil to which two per cent. of carbolic acid is added, or a two per cent. resorcin solution. The following formula is especially useful:

℞.—Linseed oil, Lime water, Oxide of zinc, Chalk . . . of each 5 parts.
Iodoform . . . . 1 to 2 parts.—M.

By means of the before-described treatment one can frequently, in fourteen days, cure an eczema of months' or years' duration.—*Jour. of Cutaneous and Genito Urinary Diseases.*

EUCALYPTUS IN SCARLET FEVER.—The value of eucalyptus in destroying the infection of scarlet fever cannot be too widely recognized. On October 26, I saw a nurse in a family where there were three young children. She had the rash over her

chest and arms, the complaint having commenced about thirty-six hours previous. She was removed to the hospital, and Tucker's eucalyptus disinfectant was ordered to be freely used in the nursery, the children being kept in an atmosphere strongly impregnated with it for three days and nights; after that they were allowed out during the day, but the disinfectant was continued in the nursery for four or five days longer, when they were considered safe.

On October 27, I saw a girl, æt. about eleven years, whose sister had been sleeping with her. She had had sore throat about two days, and the rash was fully out. The sister was not allowed to sleep with her, but she spent most of her time in the room during the next three days when the new Act came into force and they were separated. Here the disinfectant was rubbed over the skin of the whole body night and morning for three days, afterwards at night only; the emulsion was administered, and the disinfectant freely sprinkled over the bed and about the room. The girl had a severe attack of fever, had rheumatism in her wrists and ankles for a few days. The desquamation was finished about the fifteenth day, and there was no appearance of albumen in the urine. The sister did not develop the disease, although exposed to the infection for five days, and three other children in the house did not take it. There was no carbolic or other sheet used over the door, the disinfection of the patient in the way described being sufficient to prevent any of the poison escaping from her.

It is to be hoped that others will try this method of disinfection, as, if it is as effectual in all cases as I have found it in all so treated during the last six months, there is every reason to believe that the infection of scarlet fever may be arrested in every case.—J. Brendon Curgenven, M. R. C. S., in *Br. Med. Jour.*

RELATIVE VALUE OF THE NEWER ANALGESICS.—In the course of a lecture delivered in Cochin Hospital, Paris, Professor Dujardin-Beaumetz compared the new antithermic analgesics. The first rank is given to antipyrin, on account of its ready solubility, and the fact that it has little toxic power. He ridicules those who decry its use on the ground of its danger, asserting that there are few substances in the materia medica that may not be given in toxic doses, and that these same persons who object to the use of the newer drugs have no hesitation in using morphine and belladonna, which are, in reality, far more dangerous. The chief disadvantage of antipyrin is the scarlatiniform eruption which is often produced by the ingestion of large doses, especially in the case of young girls.

Close after antipyrin, and second only because of its insolubility, the lecturer places methylacetanilid, or exalgine, to which he devotes a careful description. It is more active than antipyrin, and does not produce an eruption. In ordinary cases, four grains, twice or three times daily, is a suitable dose, although, in rebellious cases, the quantity has been increased up to twenty grains a day. Owing to its insolubility in water the exalgine must be given in an alcoholic solution. The following is suggested by the author:

R.—Exalgine	2.50
Essence of peppermint . .	10.
Linden water	120.
Syrup of orange flowers .	30.

One teaspoonful (four grains) morning and night.

The remedy seems to relieve pain arising from whatever cause. The speaker had observed relief in three cases of cardialgia with anginous accessions, and Gaudiman had reported but three failures in thirty-two cases of neuralgia.

Phenacetin which is placed third on the list, being sparingly soluble, is proportionately non-toxic. It is best administered in capsules of seven and a half grains, once or twice daily, and is especially serviceable in the neuralgias of the hysterical.

Acetanilid should be placed last, according to this authority, not because it has less power, since that is not true, but on account of the alarming cyanosis which sometimes follows its use. This discoloration, however, is stated to be not particularly harmful, the remedy being exhibited sometimes for months without producing more than a passing bluish discoloration of the skin and mucous membrane.—*Therap. Gaz.*

THEINE IN NEURALGIA.—DR. J. K. Bauduy relates two cases of neuralgia treated successfully with the hypodermic injection of theine. The first patient was a lady suffering from sciatica, in whom all the usual measures, including galvanism, had been tried without avail. He injected ¼ grain of Merck's theine, rapidly increasing the dose on successive days to ½ grain, with the effect of giving immediate and permanent relief. A relapse occurred in the other leg, which was cured by the injection of ½ grain. In another case the patient suffered from occipital and supra-orbital neuralgia, which was cured by the injection of theine into the arm. He says that no unpleasant effects were noticed from its employment.—*Weekly Med. Rev.*—*The Pract.*

THE CAUSE OF DEATH AFTER CHLOROFORM.—Dr. Lauder Brunton, who, as is well known, has been in India, studying the causes of death from the use of chloroform, has sent a dispatch to the *Lancet* in which he says that the results are most instructive the danger from chloroform being asphyxia or overdose, and not due to the heart directly. Thes

results, it would seem, indicate a change in the views which were held by the investigator when he left England, viz., that the danger was from stoppage of the heart. Further details of the experiments will be looked for with the greatest interest.—*Lancet.*

CIRCUMCISION.—In performing circumcision the simplest method is the best. I use Henry's phimosis forceps, as I consider them superior to any other. I draw the loose integument forward, clasp the forceps firmly over it, and with a large bladed knife, cut away the surplus tissue at one stroke, and quickly pour a solution of cocaine (I usually use a four per cent. solution) over the cut, which stops all pain in a few seconds. The application of cocaine is repeated at intervals of a few minutes over the inner skin. Then with a pair of strong scissors I slit up the dorsal surface back to the corona; trim the sides with scissors to suit the first cut; if the first cut has been a little short I leave more of the under skin, but if too much is left it may become tender and furnish room for herpes. I then use a fine silk thread, about number eleven, to unite the cut edges. They should be nicely adapted, as in a majority of cases union by first intention can be secured over a large portion of the cut. I sometimes use the interrupted and sometimes the continuous suture. As a dressing I use a small piece of absorbent cotton saturated with balsam Peru; apply a roller bandage with a wide strip of muslin drawn between the legs, fastened in front and back to a strip around the waist for the purpose of retaining the dressings and to hold the penis erect. It is not necessary to put the patient to bed, he can go about his usual business unless it is manual labor. On the second or third day I direct him to take a bath, when I remove the stitches and apply a dressing of vaseline. In a few days he is well; a circumcised Gentile. I have made over 400 circumcisions, and fully fifty per cent. of these were for the cure of herpes. Many men who have herpes imagine they have syphilis, and with or without the advice of a physician take constitutional treatment. Many come to Hot Springs thinking they have "blood diseases." It is for this reason and for cleanliness that I advocate circumcision. I would follow in the footsteps of Moses and circumcise all male children. The operation is simple and free from danger.—Dr. Williams in *N. W. Med. Jour.*

BOXING THE EARS AND ITS RESULTS.—"We could fain hope that, in deference to repeated warnings from various quarters, the injurious practice of boxing the ears, once common in schools, is fast and surely becoming obsolete. It is too much to say that this desirable end has yet been realized. Certainly the recent observations of Mr. W. H. R. Stewart do not give color to this view. In a pamphlet on "Boxing the Ears and its Results," lately published, and illustrated by appropriate cases, he briefly summarizes his own experience in the matter. He reminds us that, notwithstanding the toughness of the aural drumhead, its tense expanse will rupture only too readily under the sudden impact of air driven inward along the meatus, as it is in the act of cuffing; and he shows that in one instance at least this injury resulted from a very slight though sudden blow. Given early and skilled attention, the wound may heal very kindly, but if the beginning of mischief be overlooked, as it often has been, further signs of inflammation soon follow, and a deaf and suppurating tympanum is the usual result. There is practical wisdom in the statement that this consequence most readily follows in the case of the poorly developed and underfed children who abound in every board school. In them an earache would probably receive no very strict attention, and disease might for a time work havoc unimpeded. When chronic suppuration exists already, and it is only too common, a random knock on the ear may result, as in a case related in the *Lancet* in a fresh otitis, with fatal brain complications. School masters and others, who may at times be tempted to apply the correcting hand somewhat too carelessly, might read the few pages of this little work with equal interest and advantage. The close connection between ear and brain should never be forgotten, and the reflection that injury to the former organ most easily terminates in total deafness, and in suppuration, which may any day take a fatal course, should assist in the preservation of a sometimes difficult patience.—*Lancet.*

ASTHMA.—Of the thousand and one things which have been tried for this disease, nothing in my experience is equal to the nitrite of sodium. I am not fond of mixing drugs, and I therefore generally give it alone. In some cases, however, with the object of promoting sleep, I combine it with hyoscyamus, and in others, again, I have found the tincture of lobelia of some additional benefit. When the nitrite of sodium first came into use I gave some large doses (ten to fifteen grains) in a case of uncomplicated asthma, which had occurred in repeated attacks for years. The first dose made the patient so sick and faint that I could hardly induce her to repeat it; but although a second dose had a similar effect, the patient was freed from her asthmatic attacks completely, and had not had a recurrence when I last saw her, two or three years afterwards. Since then I have given it in from three-to-five-grain doses, frequently repeated, and always with the greatest benefit. With regard to hyoscyamus in this affection, as well as in other diseases, I find that the ordinary doses are of little benefit. Two drachms of the tincture or of the succus for a single dose should

be prescribed, and not less than one drachm when frequently repeated. Besides having an influence over many spasmodic affections, it has a most tranquilising influence on the mind. Given alone in asthma it will not releave the spasm, but in combination with the nitrite of sodium the improved condition of the patient is sometimes simply marvellous.—*Lancet.*

IODINE AS A REMEDY FOR VOMITING.—M. Darthier bears testimony to the value of tincture of iodine administered internally for the relief of vomiting, a remedy recommended by the late Professor Lasegue in the vomiting of pregnancy. The author has observed its use in nineteen cases, eleven of which were tubercular subjects, and found that it is of more value in the vomiting of early phthisis than in that of the later stages of this disease. At the same time he gives instances of advanced cases with obstinate vomiting, where the symptom was largely controlled by the drug. Amongst other cases he gives one of bronchial dilatation (subsequently fatal from acute tuberculosis) in a female, who for three weeks, had regularly vomited after every meal. From the date of commencement of the use of the drug, she ceased to vomit, and after a week's treatment, which was not productive of any sign of iodism, was completely cured of the symptom. Apart from phthisical vomiting, M. Darthier finds it useful in alcoholic gastritis, in ulcer of the stomach, and in the vomiting of pregnancy and of chlorosis, instances of which are recorded. He says that the majority of the patients take the iodine with pleasure; it often produces an agreeable sense of warmth in the stomach, lasting from five to twenty minutes, The dose is ten drops, dissolved in 125 grammes of water, taken in three portions immediately after meals. In a certain number of cases, symptoms of iodism are produced, chiefly coryza, but a good many patients do not experience any such inconvenience from it.—*Lancet.*

THE CURE OF FACIAL NEURALGIA, ODONTALGIA AND ALLIED NEUROSES.—Dr. Geo. Leslie, in a paper read before the Medico-Chirurgical Society, of Edinburgh, announces that he has been able to cure many cases of the above-named very troublesome disorders by a very simple procedure. This procedure consists in the application of powdered chloride of sodium—common salt—to the nasal mucous membrane. The salt may be used by the patient as snuff, a pinch of it being taken into the nostrils on the affected side, and in many cases this has been found effectual in preventing a recurrence of the trouble. The best results were obtained when the salt was administered through an insufflator. A small insufflator was used for this purpose, the chamber holding but four grains. As the powder was blown in, the patient was asked to draw air up the nostril. The application produces but little pain or discomfort. Although a single application usually suffices for the immediate inhibition of the neuralgia, especially when it is recent and localized in one branch of the fifth nerve, in other cases where the disease has been of long standing and of extensive distribution, he had found that insufflation repeated every half-minute for about five minutes was required. In conclusion the author reports a series of cases cured by this novel treatment. Among these were cases of odontalgia, cephalalgia frontal and vertical, facial neuralgias of various types, and bronchial asthma.—*Ed. Med. Jour.*

ATROPINE SOLUTION IN NOCTURNAL EARACHE IN CHILDREN.—Lately I have been treating a lady for sore eyes. Incidentally she told me about her little girl, two years old, crying nightly with earache. The child could not sleep, and would not let the mother sleep. I prescribed one grain atrophine sulphate in an ounce of water, and told the mother to drop four drops into the ear whenever the child complained of pain, and let it remain there for twelve to fifteen minutes, explaining that it would do no harm, if the child should even go to sleep with the medicine in the ear. The mother and child have neither lost any sleep since the use of the medicine was begun.

I have been using atrophine solution for nocturnal earache in children for about twenty-five years, and have not yet known it to fail to promptly relieve the suffering. During this time I have known it to stop the night-crying from earache of many children. It not only stops the pain promptly, but it in a short time actually cures the trouble. At least, that has been my experience. In pain from tympanic abscesses, furuncles and otitis externa it has no appreciable effect.—*St. Louis Med. and Surg. Journal.*

THE "NORMAL" DIET.—According to Dr. G. Munro Smith, the daily destructive metabolism, which is the great criterion of work done, does not vary much among different occupations. Premising that he does not consider moderate overeating injurious, he finds that very many men eat considerably more than the most liberal tables; it is not an uncommon thing for an averaged-sized man on very moderate work to eat 25 or 27 ounces of chemically dry food a day. Women eat much less than men, after making allowances for differences in weight and work. Where a man eats 19 ounces, a woman of the same weight and of active habits eats only 14 or 15 ounces. On a diet from which all meat is excluded he has found that 12 to 13 ounces *per diem* will comfortably feed a hard-working man. A moderate amount of stimulants appears to increase the average; moderately free drinking diminishes it. A diet consisting c

one part of nitrogenous to seven or eight non-nitrogenous is a good combination; it is greatly exceeded on the nitrogenous side by the majority of men and women, especially the former. A diet of 12 to 14 ounces of chemically dry food, digestible, with the ingredients in proper proportion, is sufficient to keep in good health an average-sized man on moderate work. The majority of people (in England) eat literally twice as much as this. —*Bristol Medico-Chirurgical Journal.*

TREATMENT OF PHLEGMASIA ALBA DOLENS.—In *L'Union Medicale* of October 19, 1889, the following routine treatment of this troublesome state is given: The patient must be placed absolutely on the back; the diseased limb being treated by forcible extension, and the application of a liniment made up of olive oil, morphine, and chloroform. After this has been applied, the leg should be wrapped up in cotton batting and kept at a uniform temperature, and frequent movement and examination of the parts are to be avoided. To combat the pain, chloral and other narcotics are to be used internally, and hypodermic injections of morphine and laxatives are to be given. After the pain diminishes, alkaline diuretics are to be used to favor the absorption of the œdema, and, if necessary, the skin may be punctured to relieve the swelling. The patient should be confined to bed for thirty days until all evidences of trouble have ceased and the œdema entirely passed away. —*Medical Progress.*

EAR TROUBLE OF THE EMPEROR OF GERMANY.—We learn from the London *Truth* that the Emperor of Germany is again laid up with his ear trouble, chronic suppurative otitis media, and, in consequence of pressure of business, is dangerously temporizing with the treatment advised by his medical attendant. With a hereditary predisposition to scrofula and a consequent chronicity of the affection, it will be a question of time only when the affection shall take an incurable turn, and invite directly an extension of inflammatory action to the meninges, which may jeopardize the life of the distinguished personage. In this country we are taught that such an affection is curable by surgical interference, and the veriest pauper here has a chance equal to that of a king.—*Med. Rec.*

THE *Chemist and Druggist* gives some amusing ounter experiences of country chemists and drug-ists. One chemist reports the following order ist to hand:—"Cammermial powder, Justman's ie. Pennerths." A Birmingham chemist had a iiver the other morning. After opening the oor, in response to vigorous kicking, a youngster led in with the request, "Ha'porth 'ead and mick pills, and please give me some o' y'r bills wrap some bloaters in." Edinburgh chemists report the following curiosities:—"1d. worth of Epsom's Finest Salts."—"A powder for a child twenty-eight years old."—1d. worth of Squirrels in Syrup."—Lady Customer: "1d. worth of Tincture of Rhubarb. Is it plenty for a dose?" Chemist: "Is it for an adult?" "No, its for a man." —"A pennyworth of Cod Liver Lime."—"A pennyworth of Inside Powder and Fire and Thunder (Violet Powder)." A Lincolnshire chemist reports:—"Sanitary paper" is what she asked for; sand paper is what the new apprentice supplied. Mr. J. H. Williams, Hayle, Cornwall, has recently been called upon to supply the following orders: —"A bottle of Queen Anne's wine; Garibaldi ointment; a stedfast powder for a baby; a 6d. bottle of defective; sick-list powder; hartsin oil; ox allack assed parsin."—*Hosp. Gaz.*

PRESCRIPTION FOR PSORIASIS.—The favourite prescription of Mr. Jonathan Hutchinson for psoriasis is:

℞.—Acid. chrysophanic, . . grains x.
Liq. carbonis deterg., . . . ℥ x.
Hydr. amm. chlorid., . grains x.
Adip. benzoat., ... ℥j.
Misce, flat unguent.

At night the patient should wash the diseased surfaces free from all scales; then, standing before a fire, rub on the ointment, devoting, if possible, half an hour to the operation. This proportion of chrysophanic acid is not irritating, and stains the linen but slightly. With some cases, even a weaker chrysophanic ointment is entirely sufficient. Internally, Mr. Hutchinson prescribes arsenic, though he is not convinced that it is an important adjunct.—*Arch. of Surg.*

CHAS. A. RILEY, M.D., Rockville, Mo., says: Some time since I had occasion to treat one of the worst cases of chronic alcoholism that ever came under my observation. Patient, man, aged twenty-four, had been a constant drinker for several years, interspersed by occasional sprees, and during one of these I was called to treat him. After giving him medicine to arouse his liver to proper action, I commenced giving him tablespoonful doses of Celerina (Rio Chem. Co.) every four hours. He begged for whisky until he got under the influence of Celerina, which was only a few doses; after that he quieted down, and the terrible appetite for, and influence of whisky began to subside. In about eight days he resumed his place in business, and ever since has had no appetite for whisky, and no bad results in any form. I do not think it can be equalled as a remedy in any case where it is indicated.

STANLEY'S TESTIMONY TO THE VALUE OF VACCINATION.—In a recent letter received in London from Stanley, the explorer writes: "The small-

pox broke out among the Manyena and their followers, and the mortality was terrible. Our Zanzibaris escaped this pest, however, owing to the vaccination they had undergone on board the Madura." Such evidence is, of course, not required by any sensible man, and will not be admitted by the anti-vaccinationist, who will invoke the favorite argument of the sceptic, that of coincidence. Nevertheless it is interesting.—*Med. Record.*

The Faculty of Medicine of Paris, has been informed of an alarming increase of cholera in Central Persia and along in the Turko-Persian frontier. It is feared that the disease is approaching Europe. Inhabitants of the afflicted district are endeavoring to reach the Russian ports on the Caspian Sea, and there is danger that they will bring the cholera with them. The Caspian seaports are generally in a bad sanitary condition, and if the cholera appeared in any of them it would be difficult to suppress. It is not probable the disease will reach Western or Southern Europe during this year.—*Boston Med. and Surg. Jour.*

Creosote in Diabetes Mellitus.—Dr. Vincenzo Valentine relates the histories of two brothers who were both afflicted with diabetes mellitus. In spite of the meat diet which was prescribed by Prof. Contani, the urine of both patients continued to be loaded with sugar. The administration of creosote (gradually increased from four to ten drops per day) soon caused the total disappearance of sugar from the urine. No return of the sugar was noted even when the patients partook freely of amylaceous and saccharine diet. The author emphasizes the tolerance for creosote which both patients exhibited.—*Deut. Med. Zeit.*—*Med. Rev.*

Electrical Stimulation in Apnœa During Anæsthesia.—Drs. Hare and Martin advocate the use of the electric brush to the epigastrium in this condition, the other pole being applied to the base of the rib, not on the pneumogastric in the neck. Rapidly interrupted currents are used. They claim danger as existing when stimulation of the phrenic as ordinarily done is tried, because of the closeness of the cardiac inhibitory nerves to the latter. In noticing direct stimulation of the heart by œsophageal electrodes some time ago in one of these reviews, I called attention to this danger. There is, however, little risk in using Faradism in the ordinary way, and it is equally serviceable as galvanism in all the instances, such as failing respiration from opium poisoning, and the like.—*Times and Reg.*

Phosphorus in Diabetes.—Dr. Balmanno Squire relates the history of a gentleman, sixty years of age, who was brought to him suffering from eczema. He also had diabetes. Phosphorus was ordered for the relief of the eczema, which it benefitted very much, but at the same time it seemed to exert a most favourable influence upon the diabetes. The amount of urine passed in the twenty-four hours was greatly diminished, and the thirst, from which the patient had suffered greatly, caused very little annoyance.—*British Med. Jour.*

Treatment of Erysipelas.—Koch, in the Wiener klin. Wochenschrift, 1889, No. 27, recommends an ointment of the following composition: Creoline, 1; iodoform, 4; lanolin, 10; to be applied with a brush over the affected part and for a distance of two or three inches over the healthy skin. In twenty-five cases treated in this manner, after two or three applications a fall of temperature took place, the erysipelas was limited, and the skin resumed its normal color.

Contagiousness of Tuberculosis.—With reference to the debate on the contagiousness of tuberculosis between married couples, Dr. Leudet read a note in which he concludes that of families he had known personally and attended for the last twenty-five years, of 112 widowers and widows the companion of whom had succumbed to phthisis, seven only were affected with tuberculosis. He therefore affirms that contagion, even between married couples, is extremely rare.

Sweating of the Feet.—The result of extensive experiments in the German army as to the best treatment for excessive sweating of the feet has been to prove the great superiority of chromic acid over all other applications. Of 18,000 cases in which chromic acid was used, 42 per cent. were reported "cured," 50 per cent. "improved," and only 8 per cent, "unrelieved." The feet are first bathed, and, after being thoroughly dried, a 5 per cent. solution of the acid is applied with a brush. Two or three applications suffice, as a rule, but the treatment has sometimes to be repeated after a fortnight.—*Lancet.*

A Remedy for Neuralgia without Morphine

Antipyrin,	℥iij.
Ex. cannabis Ind.,	aa. gr. vss.
Ex. aconite,	aa. gr. vss.
Caffein,	ʒss.
Hyoscine hydrobrom,	gr. ¼.

Divide into thirty capsules.—*Jour. of Am. Med. Asso.*

A Valuable General Tonic for Females.—

R.—Syr. Hypophos. comp.	4 oz.
Aletris Cordial (Rio)	4 oz.

Sig. Two teaspoonfuls before meals. —M.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER, 23 Rue Richer, Paris.

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MEDICAL EDUCATION.

"Nature is a cruel and relentless vivisector." She carries on her experiments in the face of laws and fanatics. In her experiments upon man she teaches him lessons in physiology, which if he would but apply, would save months and years of patient labor and yield more correct and trustworthy results. Could anyone acquainted with the study of pathology, for an instant deny its value as teaching and demonstrating the truth of certain physiological theories and the falsity of others. A considerable amount of knowledge is of course necessary to apply the revelations of pathology, and these fundamental points are to be learned by every student before he can fully comprehend what is before him. Our knowledge of the development, growth, and action of healthy cell life has been largely derived from a careful study of cells invaded by disease, so that in a series of cases we can with comparative certainty determine the function, the relation and the importance of the different parts of a cell. Morbid changes associated with certain functional de-
ıgements have tanght the physician the func-
ns of organs which he otherwise never could
ve approached.

Nature, through disease, has given to the thera-
ıtist, suggestions which have proven of lasting
ıefit to man. The compiled statistics of the
ɜful clinical operator have taught lessons in
ne metabolism more valuable and reliable than the chemist and his laboratory equipments could have hoped to achieve in centuries of labor. It is sometimes required to assert for medicine a distinctness and an identity of her own. Every scientist is not a physician, although some may contend that if one has a thorough scientific training in the so called "natural sciences," he can have little more to learn to become a physician, and this view gains support in the fact that some of the branches, essential in the medical course, are taught by those who have no knowledge whatever of the application of these subjects to man. What could any intelligent physician think of a professor in physiology lecturing to a class of medical students upon the action of the human heart, upon its sounds, and the action of its valves, who himself had never listened to its beat, and perhaps had never seen that organ, the intricacy of whose mechanism he was attempting to explain. True enough something has been learned of the nervous mechanism of the heart's beat from experiments with the vagi of the frog, but there are other things equally important, and to the medical student far more important, as qualifying him for clinical instruction. In these days of so-called "practical scientists," we have volumes written upon the embryology of the chick, and these treatises are recommended as reliable text books for the medical student. We do not deny the high scientific character of these works, nor the high position their authors occupy as authorities upon this special study, but these are not works to be relied upon to furnish a clear exposition of the physiology of gestation as applied to man, any more than is the scientist to teach to medical students that same process who, himself, has never seen a human fœtus much less an impregnated or gravid human uterus. As the ovisac of the hen cannot be allowed to replace the uterus of the higher biped, any more than the pure scientist can be allowed (ignoring the immense aggregation of medical knowledge and in total ignorance of either clinical or pathological demands) to supply to medicine a comparative science, where one applied to man, learned of, and read in him, is demanded.

If we regard the nervous system of man we recognize in its arrangements a most special claim to marked distinction. It could not be that the functions of the nervous system of man could ever be understood until a very thorough and careful

knowledge of the anatomy of the same had been first acquired, and every student will admit the absolute necessity of careful and frequent dissection, to maintain a knowledge of these particular parts and upon this subject, none, save those, who are alike familiar with human anatomy and human pathology, could give any lectures which would be worth the time of the medical student to attend. No one can regard the rapid and important advancements made in the study of human anatomy, especially that relating to certain regions, but must be impressed with the necessity, for the medical student, of thoroughness in this subject before further work is attempted. What would the average student of medicine say, should the examiner happen to take him into the pharynx, eustachian tube, middle and internal ear? Yet for a physician this knowledge is eminently more required than much of the zoology which he spends his time in studying. We know there are those who imagine these scientific subjects are especially good to expand the mind, and in fact only those who have spent a great part of their lives in such study, can have an expanded mind, but if they glance at the history and art of medicine, they would see in it a field wide enough for the greatest intellect or worthiest being, "The noblest study of mankind is man." It is not unreasonable that the scientist should everywhere urge the value and importance of his own profession and advise the introduction of its subjects into every curriculum. We would do the same for medicine, nor do we seek to render medicine in any degree less scientific, but we object to the substitution of a Natural Science Course for a course upon the primary subjects of medicine. The first year medical student may be very scientific when he is fiddling with a tuning fork and trying to determine the number of its vibrations per second, but he would achieve more useful medical knowledge, if he spent that time in the dissecting room.

The public mind must before long recognize the fact, that doctors must be eminently practical. The authorities of charities, public institutions and public hospitals everywhere must learn and recognize that the possibility of a carefully conducted *post mortem* examination being made in any case, (ending fatally), would be one of the best incentives to careful examinations of patients during life and lead often to a more correct diagnosis, lest it might fall to the lot of the pathologist to exhibit in the mortuary, evidence of carelessness, or an unpardonable deficiency in diagnostic skill. In many of the hospitals of Canada the pathologist is a young attachè of the staff, and he accepts the position of pathologist as a stepping stone to future advancement; but if we look at the great medical centres in the Old World, we find the most experienced, the most scientific, the most skilled physician of the hospital, the pathologist, and justly so, for we contend, there is no experience of more value to the earnest student of medicine, than that gained in the dead house.

In crowding the Medical Course with unapplied sciences, the tendency is to neglect those of more importance, and the more will this be the case, where those not in touch with the requirements of the medical profession are allowed to influence the curriculum of study.

MEDICAL EXPERT TESTIMONY.

The question of medical testimony in law courts is one which has been made, and very properly so, the subject of much comment during the past few years. No medical man who has been obliged to spend the most valuable hours of his working day in a law court, to the great detriment of his practice and damage of his patients, listening to the quibbles of opposing counsel, and in his turn being badgered by them, but has felt it a great hardship that he has no redress. The very considerable loss of time and money he sustains in protracted cases, and the feeling that he should be attending to his regular business, are not perhaps so galling as the thought that he may be placed in very unpleasant positions by the sharp practice of lawyers who have been "coached" to ask questions, and to ask them in such a way that no man can answer them and convey a right impression to the jury, that palladium (*sic*) of the people's liberties.

Little by little some of the States in the neighboring Republic have been emerging from the semi-barbarous methods of treating medical witnesses, but the wheel turns slowly and we are practically in the same unenviable position that our medical forefathers were, when medicine was largely enveloped in mysticism and superstition. We read of the "hunger strike" and other means

by which prisoners in Siberia undertake to gain some recognition of their rights as human beings. Surely the profession of Canada should arise as a body and make some such strike as will deliver them from this incubus. The feeling among the profession seems to be universal that something should be done in the way of the relief of men, who the most actively engaged and skilful of their *confrères*, are compelled to submit to the damage the law can now inflict upon them. And yet, so far as we know, no concerted action has been taken in Canada, We append the report presented to a Congress held in Paris last August. (*Arch. de l'Anthropologie Criminelle*), by M. M. Guillot and Demange, two members of the legal profession, on "The best method of guaranteeing the interests of both the State and the culprit in the matter of medical expert testimony":

The question of the plurality of experts was discussed and the following propositions were offered:

1. In order to guarantee the interests of Society and of the accused, there should be in each case where medical expert testimony is employed, at least two experts, one of whom shall be selected by the accused or appointed for him by the court in case of his absence or refusal to choose, who shall have the same rights and functions, shall take the same oath, and shall make a common report together and be equally reimbursed by the State. 2. These experts shall be chosen from official lists made up by the public authorities and the scientific bodies designated to that duty. 3. Only those persons who in a competition before a jury composed of professors of the medical faculties and of magistrates, have obtained a special diploma, shall be put on these official lists. 4. The system of plurality of experts necessitates the formation of a supreme medico-legal council at the seats of medical instruction that shall be charged with deciding the experts of that region and be the final authority. 5. The examining magistrate shall assist at autopsies and examinations, except in certain special cases, so as to be able to instruct the expert as to facts aiding his researches. 6. The advocate of the accused may also assist so that he may be able to present the objections of the defense to the expert. 7. Instruction, comprising the general principles of legal medicine, should complete in the law schools the course of criminal procedure. 8. It is advisable, in order to facilitate the study of legal medicine, to make an exception to the general principle of secrecy, so far as to allow the students to be present at medico-legal autopsies, customarily subject to the veto of the magistrate. 9. There should be collected in the establishments of legal medicine or in public records, archives and medico-legal collections under the direction of magistrates and experts.

These propositions were discussed (*Am. Jour. of Insanity*) by the congress and some difference of opinion brought out in regard so the advisability of a multiplicity of experts. The first proposition was therefore voted with the following prefix: "*Reserving its opinion as to the advisability of having opposing experts, the Congress, etc.,*" and the second and third propositions were omitted and in their place the following was adopted: "The experts shall be chosen, save in cases requiring special competency, from official lists made up by the public authorities and designated scientific bodies." The other propositions notwithstanding some of them were criticized, were voted by the Congress with the following addition: "It is indispensible that the examining magistrates should have at their disposal the materials and necessary means for giving all needed instructions, thoroughly and rapidly."

SHORTHAND FOR MEDICAL STUDENTS.

Some medical gentlemen of prominence, in London, England, have inaugurated a movement to to promote the study of phonography by medical students.

They claim that a practical knowledge of shorthand, acquired previous to the commencement of their medical studies, would greatly facilitate their progress by enabling them to take full notes of lectures, etc., to which they could refer at any time, leaving little to their memory or imagination. This would be of much benefit to the student in assisting the memory, and acquiring an accurate knowledge of the principles taught during his college course. Pitman's System of phonography is exclusively recommended, as answering every purpose.

Doubtless a knowledge of shorthand would be of importance to students, not only in medicine, but in most other studies. But the time devoted to its acquisition must take the place of some other preparatory study. It is, therefore, a matter for consideration whether any of these can be eliminated, without disadvantage from the educational course. Experience has furnished us with little upon which we can depend in this matter, and we must rely for further tests on the superior success of those who have learned shorthand and have practically availed themselves of its advantages in their medical course. That the medical studies of the present day are sufficient to occupy all the time from youth to mature manhood, we think will not be questioned. Hence, unless it can be clearly shown that some of the preparatory work can be dropped, or the ability to take advantage of shorthand in taking notes, etc., is more than sufficient to make up for the time lost in acquiring it, we cannot see the advantage of placing more burdens on the students.

It might be, and we are of the opinion that it would be, advantageous, not only to the medical student, but to all students and business men, if shorthand were taught as one of the regular subjects at our public schools. It would not take

much time per day for a pupil, who attends one of our public schools from, say, the age of seven to twelve years, to obtain a fair knowledge of the science, and some practical and useful knowledge of the art of phonography, which for the remainder of his life would be of great advantage to him. Here we come upon the dangerous ground of recommending the dropping of some of the subjects already on the curriculum of studies at our public schools. With this we have no desire to deal, even if we possessed a knowledge which would enable us to judge on the matter, but we are decidedly of the opinion that the ability to write shorthand, could be obtained in some of the time now devoted to the study of certain matters in English Grammar, such, for instance, as rules of speech which are rarely applied in the class-room even, and never outside of it. And several other reforms in the time-honored public school curriculum, might advantageously be made, which would give sufficient time for learning phonography without serious loss to the pupil in his subsequent studies or after life.

A DOCTORS' STRIKE.—A disposition on the part of French doctors, says the *Med. Press and Circ.*, has shown itself to strike against low pay in the matter of complying with requisitions to perform post mortem examinations on the bodies of persons respecting which the police authorities are desirous of obtaining further information. When one is aware that the remuneration for such examination, including a detailed report in writing, averages five shillings, no surprise can be felt at the dissatisfaction felt and expressed, although there ought to be more dignified means of bringing pressure to bear than the summary and illegal plan of refusing to obey the magistrate's order. A few weeks since several medical men were prosecuted for illegal refusal in this respect at Rodez, and after a trial in which the feelings of the parties waxed rather warm, they were duly condemned in nominal penalties. The same thing occurred again in the department of the Rhone last week when two malcontents were fined six francs and costs for declining to conform to the law which authorises magistrates to requisition the services of medical men.

FOR THRUSH AND SORDES.—Dr. Ord, writing in the *Lancet*, says: Among the ill-fed children of the poorest residents of our large cities thrush is an extremely common and troublesome complaint. The following lotion, to be applied frequently with a feather or brush to the white patches, kills the oidium albicans more quickly than any other I know, and removes the patches after a few applications, leaving healthy mucous membrane. It consists of equal parts of lotio nigra and glycerine mixed. I attribute its action to the germicidal power of the mercury. The quantity used is so small as to be quite harmless. Another condition in which I have found the same lotion invaluable is in that of the sordes which collect so abundantly on the teeth, lips, and tongue in many cases of enteric fever. It cleans these parts as if by magic, and renders that unpleasant process known as "scraping the tongue" quite unnecessary. It may also with advantage be painted over the fauces, etc., in those unhealthy conditions of the throat which are so common in typhoid. I tried it in one case of catarrhal stomatitis, but it had no effect, whereas chlorate of potash effected an immediate cure. Also in the sordes of advanced phthisis it seems to be of no use. Not having seen this lotion mentioned in any book, and having found it superior to any of the usual preparations in use for these affections, I venture to bring it to the notice of the profession, in the hope that it may prove as great a boon to other practitioners as it has been to myself.

A LARGE DOSE OF SULPHONAL WITHOUT FATAL SYMPTOMS.—A Berlin correspondent of the *Med. Press and Cir.*, notes the following remarkable facts observed after a very large dose of sulphonal:—

On January 5th of the present year a workman in Riedel's factory took a full tablespoonful of sulphonal, that he might for once have a good sound sleep. Half an hour later, feeling no effect, he took two tablespoonfuls more and went at once into the village beerhouse. In about half an hour after taking the second part of half a glass of beer, such a tired feeling came over him that he left the remainder of the beer on the table, "went home and so to bed," as Pepys says. He remembers nothing after this. At ten o'clock on the morning of January 8th he was aroused from his sleep, recognized the people about him and were

off to sleep again. On the 9th, at one in the afternoon, he was awakened by his wife, and remained awake till eight in the evening, felt stupid, but was rabidly hungry, and enjoyed some food. The next morning he got up at seven o'clock, and from that time felt no trace of tiredness or mental disturbance.

Three tablespoonfuls of sulphonal would equal about 420 grains. No wonder he slept for days and nights. The wonder is that he sleeps not now.

THE TREATMENT OF PHLEGMASIA ALBA DOLENS.—*L'Union Med.* attributes to Delore and Poulett the following sketch of the proper treatment of phlegmasia alba dolens :

Absolute rest in the dorsal decubitus, the affected members placed in an attitude of forced extension, and a mixture of oil and chloroform applied ; then cotton batting is placed around the limb, which is to be kept warm at an even temperature. Movement and repeated examinations are to be avoided. To combat pain, narcotics by the mouth, subcutaneous injections of morphine, and laxatives are in order. When pain begins to subside, alkaline and dieuretic drinks may be given to hasten resolution of the œdema. If there is much œdema, the fluid may be allowed to ooze out through small incisions or through a drainage-tube. The patient should be kept in bed for thirty days after the cessation of pain, and until the œdema has almost completely disappeared.

FOR RHEUMATISM.—Dr. Staples states in the *Hosp. Gaz.* that he has found oil of wintergreen very satisfactory, and in almost every case it gives relief when administered internally in minimum doses. He has also used the oil for acute gout. His prescription for a liniment is :—

℞.—Oil of wintergreen, : . . . f ʒ ij
Olive oil, ... f ʒ iij
Soap liniment, ... f ʒ iij—M.

A very little of the liniment is used ; caution e patient against using too much, and if the umatism is limited to one or two joints, he ommends applying cotton-wool after its appli- ion, and then bandaging the joints.

NOTHER VIEW ABOUT HYPERTROPHED TURBI- ED BONES.—Much has been said and written the evils arising from hypertrophy of the turbinated bones. That the evils may have been exaggerated regarding this condition, will appear from the following (*Med. Rec.*) :—

Dr. Mayer, in the course of some remarks, said there were cases in which hypertrophy of the turbinated bone produced no symptoms, and he thought it depended a good deal upon the point at which pressure was made, whether it involved nerve-filaments and produced symptoms. Then, too, there might be irregular distribution of the nerve. He believed strongly in removing hypertrophied tissue of the inferior turbinated bone, and establishing free drainage.

THE second congress for the study of tuberculosis will be held at Paris, late in July, 1890. The subjects for discussion will be ; 1 Identity of tuberculosis in man with that in the bovine species, fowls and other animals. 2. Bacterial and morbid associations of tuberculosis. 3. Hospital provision for those suffering from tubercular disease. 4. Agents not injurious to the organism, capable of destroying Koch's bacillus, from the point of view of the prophylaxis and treatment of human and animal tuberculosis. The general secretary is Dr. L. H. Petit, 11 Rue Monge, Paris, to whom the names of those who desire to take part in the Congress should be sent together with a postal order for twenty francs. The president of the Congress is Professor Villemin.

ROSENBURG ON THE TREATMENT OF LEUKOPLAKIA.—In all remedies used in the treatment of leukoplakia (*Ed. Med. Jour.*) the balsam of Peru holds first place. It not only checks the pain and heals the lesions denuded of epithelum, but clears up cloudy epithelial patches, and causes deposits to disappear. Two things are necessary—protracted application and a pure preparation of the drug. When fissures are present and the epithelium denuded, the balsam is to be applied gently with a brush, but otherwise a stiff brush is to be thoroughly used, so as to act in a degree mechanically. The application should be made three times a day, and kept in contact with the lesions for at least five minutes at a time.

OXYTOCIC ACTION OF QUININE.—In a paper lately read before the Clinical Society of Maryland, Dr, J. C. Atkinson gave the following as his conclusions in regard to this action of quinine :—

1. The cinchona preparations have not a fixed and definite influence in causing contractions of the uterus.

2. An oxytocic action is occasionally produced by these remedies. This action depends upon idiosyncrasy; and, as in the other idiosyncratic reactions to cinchona, it is impossible to foretell, in any given subject, its manifestation.

3. There is some evidence that this action is only exerted under large doses or in debilitated subjects.

4. Cinchona and its derivatives should be employed during pregnancy with great circumspection, and should be at once withheld upon the supervention of symptoms indicating a uterine-motor influence.

FOR HÆMORRHOIDS.—Kossobudski (*Deutsche Med. Woch.*) gives the following formulæ for the treatment of hæmorrhoids. For the external variety:

R.—Chrysarobin	12	grains.
Iodoform	5	"
Extract of belladonna	9	"
Vaseline	1	ounce.—M.

Sig.—Wash the parts with a 2% solution of carbolic acid or a 1% solution of creolin several times daily and apply the ointment.

For the internal variety he uses the following suppositories, which cure most of the cases after two or three months' use:

R.—Chrysarobin	1½	grains.
Iodoform	⅓	grain.
Extract of belladonna	1	grain.
Cacao butter	30	grains.—M.

TO PREVENT MIGRAINE.—Dr. Hammerschlog, (*All. Med. Cent. Zeit.*) (*Med. Pract.*) employs the following combination for the prevention of attacks of migrane, and states that hitherto it has always proved successful:

R.—Caffeinæ citrat.	gr.	xv.
Phenacetin,	gr.	xxx.
Sacch. albi,	gr.	xv.—M.

Fiat. pulv. Div. in capsulæ—X.

Sig.—One to be taken, in the intervals of the attacks, every two or three hours.

Phenacetin does not act so promptly when given alone. This treatment should be continued until a decided remission occurs, which will usually be in a short time.

COCAINE IN VOMITING.—Dr. Everson, in *N. W. Med. Jour.*, says, in vomiting in pregnancy ⅛ to ¼ grain, three times daily, will generally be sufficient. A formula which has proved useful in my hands in the latter affection is the following:

R Cocain. hydrochlorat	gr.	⅛
Ext. nucis vomicæ	gr.	⅛
Pulv. asafœtida	gr.	ij M.
Fiat. capsula, j.		

Sig.—Three times a day, half an hour before eating.

Cocaine will be found of value where other remedies fail. I have found it successful in those cases of vomiting of pregnancy in which the so-called specifics, oxalate of cerium, etc., have failed.

SHARP PRACTICE.—Prof. Billroth (*Times and Register*) stipulated to perform an operation on a Russian Jew, in a small town, for 5,000 marks. On making the journey, he was informed that the Jew was dead, but to render him some equivalent for his loss, an offer was made for him to treat five hospital patients at 1,000 marks each. He accepted the offer, and before starting homeward learned that one of the patients whom he had just treated was the supposed dead man, who had received the Professor's services for one-fifth the original fee.

SALICYLATE OF SODA SUPERIOR TO QUININE IN CONTROLLING FEVER OF TUBERCULOSIS.—Professor Jaqcoud, of Paris (*Jour. of Am. Med. Association*), considers the salicylate of soda as the best antipyretic in febrile tuberculosis, given in a maximum dose of two grammes in twenty-four hours. A daily dose of one gramme may be continued for a long time, taking the precaution to give the patient a large quantity of water after each dose In the light of present facts he considers it inadmissible to give the sulphate of quinine in these cases.

FEMALE PHYSICIANS IN ENGLAND. –There are at present (*Med. News*) 73 female physicians in England holding diplomas and licenses to practise. London possesses 22, other cities 34, and 17 in India are also included. The new Hospital fo women has a staff composed entirely of "lady doctors," although the consulting physicians are

the sterner sex. The medical school for women has a faculty of 48 professors, 4 of whom are ladies, and 91 students.

THE arrival in Havana, Cuba, is announced (*Med. and Surg. Reporter*) of Dr. Hamilton, of the Marine-Hospital Service, and Dr. Horlbeck, of the Charleston Board of Health. They are a part of a medical committee empowered to make a mid-winter inspection of the yellow-fever habitats in Cuba and also of the Key West quarantine, Tampa, Sanford, and other exposed points in Florida.

BORATED LANOLIN.—The following preparation (*Med. and Surg. Reporter*) is recommended as being excellent for softening the hands or general toilet purposes: 1 part of borax is rubbed with 10 parts of lanolin, and 100 parts of water are gradually added. This makes an emulsion in which the lanolin is very finely divided and quickly absorbed by the skin. It may be blended with glycerin and perfumed.

SALICYLATE OF SODA IN DYSMENORRHŒA.—Reynolds and Haven (*Boston Med. and Surg. Jour.*) have had excellent results from the use of salicylate of soda in dysmenorrhœa. The action they think is only temporary, but the relief from pain most marked. They gave it in ten grain doses three times a day for one week before the catamenia, and afterwards as long as the pain had usually lasted.

SWEAT-BANDS OF HATS may contain even twenty-eight per cent. of fatty acids which in summer may penetrate into the forehead and cause inflammation and corrode deeply into the skin. Rub with burnt magnesia every little while, so as to leave a small film on the band; wipe it off with a cloth before applying again.—*Prager med. Wochenschrift.*

FOR TAPEWORM.—Dr. Canopi (*Med. Press and Cir.*) recommends the following treatment for the moval of tapeworm. In the evening a dose of astor oil should be administered. The following orning two drachms of thymol divided into 12 ses are to be taken, a dose every quarter of an ur, and after the last dose of thymol, a dose bout five fluid drachms) of castor oil. A few nute after the last dose of castor oil has been en the tapeworm will be expelled entire.

FOR enuresis the *Cincinnati Med. Jour.* quotes the following from Dr. William Perry Watson as very successful, especially in children:

℞.—Atropiæ sulph. . . . . gr. j.
Aq. destillat . . . . . ℥ j.—M.

Of this one drop for each year of the age of the child is given at four and seven o'clock in the evening.

Under this treatment a permanent cure was effected in a series of thirty consecutive cases occurring in private and asylum practice. He claims that the sulphate of atropine in enuresis is a remedy which is unequalled in materia medica.

ANOTHER TÆNIACIDE.—The *Deutsche Med. Woch* gives the following as efficient:—

℞.—Croton oil, ... 1 drop.
Chloroform, ... 1 drachm.
Glycerine, ... 1½ ounces.—M.

One-half of this should be taken in the morning on an empty stomach; half an hour later, the remainder. The patient's diet should have been light on the previous day.

The London Lancet says: There seems to be little doubt of the advance of cholera in Asia Minor, and therefore of the increasing probability of its invading Europe. Intelligence was received this week from Bassorah stating that 3,000 fatal cases had occurred there, including the English Vice-Consul, Mr. Robertson, and two of his children.

DR. H. MARION SIMS treats specific vaginitis (*Pacific Med. Jour.*) in the female by painting the walls of the vagina with a solution of nitrate of silver of the strength of one drachm to the ounce. Erosions of the cervix, with or without lacerations he relieves rapidly by an application on absorbent cotton of one part of Monsels solution to four parts of water.

DR. FRANK FERGUSON, Pathologist to the New York Hospital, has been elected Pofessor of Pathology in the New York Post Graduate Medical School and Hospital.

REMOVAL.—Dr. Price Brown has removed from No. 41 to No. 10 Carlton Street.

Books and Pamphlets.

THE NATIONAL MEDICAL DICTIONARY, by John S. Billings, A.M., M.D., LL.D., Edin. and Harv.; D.C.L. Oxen., etc., with the collaboration of eleven others. Published by Lea Brothers & Co., Philadelphia.

We know of no more required work than a good medical dictionary which shall include the many new terms, which during the last few years have been introduced into medciine, and regarding which the older dictionaries leave the general practitioner and student so far behind the times. With the advancement of the special sciences and departments, so many varied terms have been employed to designate certain conditions, and express more modern views and explanations that the old dictionaries of medicine have become next to useless. In the work mentioned above we have one of the most complete medical dictionaries that could be desired. We have not had to hand so satisfactory and pleasing a work for many a day, and in saying it supplies a long felt need to medical men, is but to speak what must be the universal feeling of all who take the trouble to examine its pages. It is not merely a medical dictionary but one complete regarding all medical terminology and language. It is handsomely bound in two volumes and a work, which we do not think it too much to say, is indispensible to every medical man's library.

"GRIP" FOR 1890. CANADA'S COMIC PAPER. *Grip* Printing and Publishing Co., Toronto.

Grip begins its thirty-fourth volume with the New Year, which means that this brave little journal has celebrated its *seventeenth* birthday. When we say—as we can without hesitation—that its ability both literary and artistic has been kept up to a uniformly high standard throughout this long period, and that to-day it is as bright as ever, we mention a fact exceedingly creditable, not only to the conductors of *Grip*, but also to the Canadian people, without whose appreciation and support this phenomenon of journalism would have been impossible. We call it a phenomenon advisedly, for so far as we are aware, there is not another country of Canada's age—certainly no other Colony—that can boast of a sixteen-year-old Comic Journal. *Grip* has well deserved its success. It is not merely a clever and amusing paper, it is also a recognized power in Canadian public life, and a power which, we are glad to say, is always on the right side where questions of moral principle are concerned. It ought to be a pleasure to every Canadian to contribute to the success of such a journal,—and the most practical way of doing this is by subscribing. The price is only Two Dollars per year, or if taken in connection with THE CANADA LANCET, the price for both will be $4.50. Subscriptions may be sent direct to *Grip*, Toronto, or to this office.

A TEXT-BOOK OF ANIMAL PHYSIOLOGY, with introductory chapters on General Biology and full Treatment of Reproduction, by Wesley Mills, M.A., M.D., L.R.C.P., Eng., Prof. Physiology in McGill University and the Veterinary College, Montreal. Over 500 illustrations. New York: D. Appleton & Co.,

It is our pleasant duty to congratulate the well-known author, Prof. Mills, on producing a work of Physiology upon such advanced lines. He has in his work produced, side by side, biology human and comparative; but he has also distinctly separated them when and where necessary. The author has also given reference to the work done by the pathology of man in elucidating many physiological problems. If we may be allowed to specify any particular portion of the work as of special excellence, we would mention the chapters on The Spinal Cord and Brain, as being, in our opinion, particularly complete. We regard it as a work of great excellence.

HANDBOOK OF MATERIA MEDICA, PHARMACY AND THERAPEUTICS, by Samuel O. L. Potter, M.A., M.D., Professor of the Theory and Practice of Medicine, in the Cooper Medical College of San Francisco. Price $3.00, cloth; $4.00 in full leather. Second edition, revised and enlargod, Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street.

This treatise on Materia Medica and Therapeutics, is one full of practical points and quite up to date, regarding the origin, source and actior of all modern therapeutic agents and methods. I addition it contains many practical and valuabl hints to the practitioner, regarding the combins tion of drugs, and the method of prescribing them It is a work we can highly recommend.

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Original Communications.

INTERALIGAMENTOUS OVARIAN CYSTOMATA.*

BY S. KEENE, M. D., BROOKLYN, N. Y.

In the hope of being definite and sufficiently comprehensive, I have chosen the term "intraligamentous ovarian cystomata," to designate the class cases of which I propose to discuss.

In order to define this matter as clearly as possible, I may state that I have observed ovarian and parovarian cystomata connected with the broad ligaments of the uterus in three different forms. First, the cystomata developed from the follicular portion of the ovary, and that were attached to the broad ligament by a small pedicle, composed mostly of an elongated portion of the peritoneum. Second, parovarian cystomata having a sessile attachment composed of peritoneum, derived from the posterior fold of the broad ligament, the anterior fold of which remained without material change. And lastly, cystomata developed from the ovary and situated completely within the folds of the ligament. The latter forms constitute the true intra-ligamentous cystomata which differ essentially from all others in being neither pedunculated nor united to the ligament by sessile attachment, but surrounded by a capsule formed from both folds of the ligaments. It is claimed by some that these intra-ligamentous cysts are usually of parovarian origin, but I am satisfied that they are also developed in many cases from the ovary, generally, perhaps, from the paroöphoron, and it is to this class that I propose to limit my attention on this occasion.

The essential difference between these and the ordinary ovarian cystomata is in the position they occupy in relation to the ligaments of the uterus. The location may be called an unnatural one, because it differs from that which ovarian neoplasms usually occupy.

They are comparatively rare, a fact which indicates that they occur in this location under circumstances that are exceptional to the general laws of pathology which obtain in ovarian neoplasms. This raises the question regarding the causes operative in determining their peculiar characteristics. Two theories have been advanced to explain the morbid anatomy of these cystomata. The one assumes that owing to some error of development the ovary during embryonic life finds its way in between the folds of the broad ligament in place of remaining in its normal position.

If a cystoma occurs in an ovary so dislocated it is bound to convert the ligament into a capsule for itself. I am not aware that there is any positive evidence that this theory is correct. There are a number of cases on record of malposition of the ovaries which may fairly be attributed to lesions of development, but not any in which the ovary has been found within the folds of the uterine ligaments.

The second theory is, that during the growth of the cystoma it burrows, so to speak, into the ligament which forms a ligamentous capsule for it. In order that this may come about it is necessary that the ovary, by a special formation, be closely attached to the ligament, or fixed there by inflammatory adhesions. At the same time the cyst develops in the deeper structures of the ovary, and, meeting resistance on the free peritoneal surface, pushes its way in between the folds of the ligament, instead of growing towards the abdominal cavity. There is evidence that this theory is correct in the fact that these cystomata come from the paroöphoron, the portion of the ovary which is the most closely connected to the ligament, and are therefore predisposed to burrow and become intraligamentous. Furthermore, I have in one of my own cases found the ovary from which the cystoma came, imbedded in the posterior folds of the ligament. It would be more correct perhaps to say that the ovary was spread out upon the posterior fold of the ligament. It was so changed in form that I would have overlooked it, had it not been that there were several small cysts in it, surrounded by what appeared to be an ovarian

*Read before the Ontario Med. Association, June, 1889.

stroma. In one other case I found while enucleating the cyst that it was firmly adherent at a point in the posterior fold of the ligament where the ovary is to be found, and the vessels were larger there than anywhere else. This led me to believe that the ovary was there also, but the parts were so changed by inflammatory products that I could not positively detect any ovarian tissue. This, I think, is sufficient to settle the question of location of some of these cystomata, and presumably the larger number, if not all of such; still it may be admitted that malposition of the ovary, because of a lesion of development, may obtain in some cases.

These cystomata may be simple or multiple. I think, however, that they are more often monocysts. All of my own cases, eight in number, have been so. Another interesting feature is that they are often papillary or proliferous cysts. This, according to some authorities, notably Bland Sutton, of London, is due to the fact that they are developed from the deeper structures of the ovary, the paroöphoron.

Special attention is invited to the position of these cystomata and their relations to the pelvic organs. This question of location has a very important bearing in regard to treatment, as will be seen further on. In my own practice I have found them occupying widely differing positions. In some, the tumor was situated in one ligament, displacing the uterus to the opposite side of the pelvis, and in a lesser degree the bladder also. In others the tumor occupied a position in both ligaments between the uterus and bladder. When thus located the tumor, uterus, bladder and ligaments have been found high up out of the pelvis, so that the most dependant portion of the tumor could not be easily reached through the vagina. Again, I have fonnd the tumor behind both the uterus and bladder and yet between the folds of both ligaments. In all of these the pelvic organs were carried up out of the pelvis, but the tumor descended towards the pelvic floor. It appears that there is a rule which determines the location of those tumors in their relations to the pelvic and abdominal cavities, which may be formulated as follows: When situated between the uterus and bladder, the tumor and pelvic organs rise up into the abdomen in the latter stage of its growth, whereas if both uterus and bladder are in front of the tumor it dips well down into the pelvis. The reason is that in the one case the vagina arrests the process of burrowing, while in the other there is no resistance to the descent of the cystoma. In all cases the broad ligaments become greatly enlarged and thickened, and usually cover the whole cyst. When the cyst does not descend into the pelvis and has attained considerable size, the upper portion of it may present a comparatively thin wall, owing to the fact that the ligaments diminish in thickness and vascularity until there is but little of their structure left except the peritoneum, and hence the upper part of the cyst then appears more like an ordinary intraperitoneal ovarian cystoma.

These facts regarding intra-ligamentous cystomata and their anatomical relations, are of the utmost importance in regard to their surgical treatment, and hence the reason for this brief account of the various ways in which they may be situated.

The diagnosis is likewise of interest because of the difficulties encountered in operating and the urgent necessity for clearly comprehending the exact conditions present, in order to manage them to the best advantage.

There is nothing in their history which is diagnostic. During the early stages of the affection distressing pains in the pelvis are often present. The functions of the rectum and bladder are frequently disturbed, especially if the cyst descends into the pelvis. In this respect the history differs from that of ordinary ovarian, and especially parovarian cystomata which usually cause very little local or constitutional disturbance, unless attended with complications. The physical signs vary somewhat according to the location of the tumor and its surroundings. Examination of the abdomen shows that the tumor is fixed at its most dependent portion and that the fixation is on one side, or extends from side to side according as the tumor occupies one or both ligaments. These signs contrast with those of a cystoma having a pedicle which permits of free movement of the tumor, but an ovarian cystoma fixed to the pelvic organs by inflammatory adhesions gives similar signs, and hence the two conditions cannot be differentiated by the abdominal examination alone. The vaginal and bimanual examinations give the most valuable evidence. In those which occupy both ligaments behind the uterus and bladder the

tumor is found low down in the pelvis, the bladder and uterus in front of it, the cyst wall and uterus are firmly united, the uterus is not enlarged to any extent, and fluctuation is noticeable in the pelvic portion of the tumor. The only other neoplasm, that I have met with, which gave similar signs, was a pedunculated fibrocyst, without enlargement of the uterus. The points of difference were, that the fibrocyst had far more solid portions below, and the uterus was movable upon the tumor. When the cystoma occupies both ligaments between the uterus and bladder it is high up in the brim of the pelvis, the uterus behind it and fixed there; the bladder high up in the abdominal cavity, and the tumor occupies a position in the upper portion of the pelvis where the normal broad ligament should be found. These signs may be simulated to some extent when a pedunculated ovarian tumor gets in front of and above the uterus, and crowds it back into the hollow of the sacrum, but the distinction can be clearly made, from the fact that in the latter case the uterus is not so absolutely fixed to the tumor, and is lower down and retroverted, a position which it could not occupy in a case of intraligamentous cystoma.

When the tumor is confined to one ligament, the physical signs found upon examination of the abdomen show that the tumor is most prominent on one side and there is a space occupied by intestines on the opposite side. The fixation below and on one side is complete. By the vaginal touch the uterus is crowded far over to the opposite side of the pelvis and fixed to the tumor, but not lateroverted to any great extent. The bladder is also displaced laterally as shown by the touch and sound. The touch further shows, as it does in all cysts within the ligaments, that the tumor rests directly upon the pelvic walls without the folds of the broad ligament intervening. There is fixation of the tumor but it is not absolute unless there has been inflammation in and about the cyst. Obscure fluctuation can be generally found by the bimanual touch. There are several affections which closely resemble a cystoma in one ligament in the early stages of its development. These are, an intraligamentous uterine fibroma, a hydrosalpinx and ectopic gestation. Fibroma can be excluded by the absence of the extreme density characteristic of the variety of tumor, non-enlargement of the uterus, and the history. Hydrosalpinx differs from a cystoma in the ligament, in being farther back in the pelvis and in being in part behind the uterus, and the uterus is not necessarily fixed to the tumor. Ectopic gestation gives physical signs more like a distended Fallopian tube, and differs from all other pelvic tumors in its general history. Should a doubt exist, time will suffice for the cystoma to enlarge beyond the usual limits in the size of any of the three affections which are to be differentiated.

It must be admitted, however, that cases will come along occasionally that will leave a doubt in the mind in regard to the diagnosis, even though the examination be most critical. In fact, it is impossible to make a complete diagnosis upon the evidence obtained by the history, symptoms, and physical signs, in some cases. Under these circumstances the question arises, whether or not the patient should be subjected to an exploratory laparotomy. I have always decided in favor of laparotomy, except when there was a suspicion that the tumor might be malignant. In such doubtful cases there is usually free fluid in the peritoneal cavity. A portion of this fluid should be removed by the aspirator, and if blood and the characteristic papillary cell is found, on microscopic examination, surgical treatment is uncalled for. I may add that I have seen several cases of ovarian cystosarcoma which were supposed to be cystomata in the ligaments, but on an examination of the fluid the diagnosis was made, the correctness of which was proved *post mortem*. In one case I made the diagnosis and advised against interference, but a friend made a laparotomy and found that he could not remove the tumor.

In the absence of all evidence of malignant disease I favor laparotomy to complete the diagnosis and treatment if found practicable. At the same time, I must say that it is not always an easy task to complete the diagnosis after laparotomy. A few words on this subject may be admissible, in view of the importance of the matter and the fact that this operation has become so fashionable. We hear much about making an exploratory operation for diagnostic purposes, without being told how to do it; but leaving us to infer that it is easy to do. I am satisfied that skill is necessary in order to be successful. To recognise just what is present and to determine just what to do in these cases, when the tumor is exposed, is

not easy, and still a diagnosis must be made upon a rapid inspection and palpation. Moreover, upon a prompt decision, regarding the exact conditions and how to manage them, depends the success of the surgeon in incomplicated cases. To do all this promptly, considerable training is required which can only be obtained by seeing and handling such morbid growths. This is the opinion that I have formed after having had my share of trials and vexations. I have also seen, in the practice of others, much confusion and delay in making a diagnosis and in deciding how to proceed with the treatment, all of which, increases the risk to the patient.

I am not confident that I have seen or carefully thought of all the conditions which may simulate intraligamentous ovarian cystomata, as seen after the abdomen is opened, but I have encountered a number and shall briefly state what I have observed and how they may be differentiated.

(*To be continued.*)

EARLY OPERATIONS IN DISEASES OF THE ABDOMEN OF DOUBTFUL DIAGNOSIS.*

BY J. C. MITCHELL, M.D., C.M., ENNISKILLEN, ONT.

The number of fatal cases variously diagnosed as Peritonitis, Intussusception, Volvulus, Perityphylitis, etc., that at different times have come under my notice, induces me to bring this subject before the Association.

In the majority of these cases the diagnosis was not verified either by operation or post-mortem examinations. Nearly all were treated in the orthodox way without any operation having been attempted.

Our leading surgeons at the present time do not hesitate to open the abdominal cavity in nearly all cases where the diagnosis is not clear, and a very large percentage of their reported operations are attended with success; but in the country, and probably in some towns and cities, many patients still die without having even the chance for recovery that an operation might give them. The statement was made at this Association last year in one of the discussions, that no one should attempt a laparotomy, or any similar operation, without previous experience, so that in every case a man skilled in that branch of surgery should be called to operate. This statement should no doubt stand unchallenged for cities and large towns where experienced surgeons are at hand, but in country districts, especially among the poorer classes, if the necessity for such an operation presented itself, the attending practitioner or some convenient consultant must undertake the operation.

The diagnosis of the exact anatomical cause of acute obstruction is seldom possible, and where it is persistent if an operation were at once performed the chances of success would be increased. I will relate two cases of obscure abdominal disease which although resulting fatally from too long delay in operating may, I hope, draw forth some expressions of opinion from those who have had experience in abdominal surgery; and may encourage my fellow country practitioners so that some fellow-being suffering from a similar disease may be given that chance to recover.

CASE I.—Mrs. S., aged 62, an active little woman, mother of a large family, had a femoral hernia of right side and had suffered occasionally from intestinal colic, for both of which troubles she received medical treatment. She was taken ill Dec. 29th, '87, with moderate abdominal pains; on the 30th inst. I was called in and found her suffering considerable pain, chiefly in the right inguinal region; pulse and temperature almost normal, bowels inactive, no flatus passing; bowels usually constipated. The abdomen not distended, not tender, hernia, causing no trouble, tongue coated a dirty yellow, some nausea. I administered the usual remedies and found her more comfortable in the evening; nausea however increasing with some vomiting.

31st inst. Persistent pain, bilious vomiting, quickness of pulse and slight elevation of temperature, no movement of bowels although enemata were administered and other treatment faithfully carried out. Sunday, Jan. 1st, '88, symptoms aggravated; she began vomiting fæcal matter; the heart, which in health had been intermittent, became more irregular in action, and pulse feeble.

Jan. 2nd.—Vomiting profuse and stercoraceous, pulse intermittent and weak, temperature 100°. Dr. McLaughlin, of Bowmanville, saw the case with me, and was fully agreed as to treatment and

*Read before the Ontario Med. Association, June, 1889.

diagnosis of obstruction; the symptoms being those of strangulated hernia. We considered the advisability of an operation, but as the patient was in a somewhat collapsed condition, hands and feet cold, face pinched; pulse 100, small and irregular, we decided it was useless to think of it at that time.

Jan. 3rd.—She was easier, had vomited less, but was in a very weak condition. On the afternoon of Jan 4th, as she had rallied a little, Dr. Hillier, of Bowmanville, was called, and we decided to operate.

Thursday, 5th inst., a.m.—Patient was a little weaker than on the previous night, having been vomiting in the meantime; she was again examined by Drs. McLaughlin, Hillier and myself without any fresh development, no hernia could be detected nor any tumor, bowels resonant and a little tender. The rectum, as before, was empty, and nothing abnormal could be felt. There had been no tenesmus or passage of flatus since the last natural action of the bowels on the 29th ult., a period of seven days. The urine had been normal. Everything being in readiness we proceeded with the operation. The ordinary antiseptic precautions were observed; I opened the abdomen by the usual central incision. We found the peritoneum normal, bowels congested, and on examining the right side found the cæcum and surrounding parts normal. Tracing the undistended ileum from this point we soon came on the seat of obstruction, as we found the bowel firmly attached, and on close examination, the trouble proved to be an *obturator hernia*. The bowel was quite inflamed and adherent, and was withdrawn with considerable difficulty. The loop of bowel, although much inflamed, was apparently in a recoverable condition. The wound was closed with a drainage tube at lower part. Patient rallied fairly; she complained of a good deal of pain, which was relieved by a hypodermic of morphia. Flatus passed freely through the bowels the next day. The patient never recovered strength, as she was unable to take nourishment to any extent by the stomach, and though rectal alimentation was faithfully tried, it proved of no avail; she gradually weakened and died on the fifth day after operation. The bowels moved quite freely the day before her death; at all times flatus passed freely, and there was much greater freedom from pain. The wound healed nicely, notwithstanding the condition of patient, and at the time of death was nearly united. From the relief afforded by the operation and the length of time the patient lived afterward, had the operation been undertaken early the chances of recovery would have undoubtedly been good. The delay until the patient was weakened by the excessive vomiting and pain told very strongly against her chances of recovery.

Case II.—This case occurred in the practice of my neighbor, Dr. Fish, of Blackstock. He has kindly furnished me with the history, of which I will give you a synopsis. Master A. H., aged 15, nearly six feet in height, very well proportioned, intelligent, and fond of sport in which he took a great interest. He had taken an active part in the games in Cartwright, on the 12th of July, 1888. For two weeks previous to his illness he had not felt so well as usual, but had made no complaint, nor had his parents noticed anything amiss.

On July 19th, 1888, after a free natural movement of the bowels he was taken with pains in the belly, and his father procured and gave him two pil. Cath. Co., which moved him two or three times, when pain became more severe and the doctor was called in. He found the patient with legs drawn up, suffering intense pain, very restless, anxious expression, temperature 103°F., pulse 120. The pain extended over the entire abdomen and was not referred to any particular part. The diagnosis was peritonitis. Appropriate treatment was applied, but the patient gradually grew worse. Enemata were used freely, but no passage of fæces or flatus took place.

I saw the patient at one a.m. of the 23rd inst. He was apparently in great pain, although opiates had been freely administered. Peritonitis well marked and undoubtedly obstruction from some cause; I advised an immediate operation as the only thing that would give the boy a chance to live. This suggestion was not acted upon and I returned home. On the afternoon of the 24th inst., in company with Drs. Hillier and Lammiman of Bowmanville, I again saw the patient, when symptoms were much aggravated and he was in a decidedly worse condition for operation. After a long discussion with the parents it was decided to operate and about 5 p.m. we began. Pulse 110 small and thready; temp. 100½°. Found the abdo-

men exceedingly tender, very much distended, tympanitic at the upper portion, slightly dull at the lower part, dullness more marked in left inguinal region. No flatus had passed since the beginning of the illness.

On opening into the abdomen the parietal layer of peritoneum was found to be much inflamed. Dr. Fish extended the incision through this and a very nauseous odor at once filled the room; when the incision was but a short distance below the umbilicus, putrid pus welled up from the wound. On closer examination the case was found to be one of peritoneal abscess, situated in the left inguinal region, and in the sack of the peritoneum.

The obstruction was doubtless caused by the pressure of the abscess. The amount of pus was estimated at fully half a gallon. The peritoneum and the bowels as seen through the visceral layer were greatly inflamed, and dark in color. After the pus was thoroughly evacuated, a drainage tube was inserted, the wound was closed and the patient placed in bed.

He rallied nicely and had a pretty comfortable night; bowels moved twice and flatus passed freely, being the first since the 19th inst.

Next morning, 25th inst., temp. 99,° pulse 100 and firmer, free from pain except a certain amoumt of soreness over the bowels, looked brighter, felt better, could take broth and whiskey. From that time he partook of nourishment freely, pulse gradually getting stronger and more regular. Temperature normal, bowels moving naturally. He continued to improve until the evening of the 29th, when he complained of pain in the shoulders and right side. The doctor thought these symptoms due to absorption of pus, and the quantities given of whiskey and quinine were increased.

The next day, 30th, pain increased, with elevation of temperature; a decided change for the worse, and he died quietly on the evening of that day.

From two to four ounces of pus were drawn off daily by syringe, besides that discharged from tube. The wound was carefully washed out twice daily with carbolized water. A peculiarity of the case was, an abscess of that size being found on the fifth day of the boy's illness, as he had not previously complained of any trouble.

Dr. Fish says, in concluding his remarks on this case, "I may say, there is not a doubt in my mind, that had an operation been done the night you first came, he would have recovered."

Correspondence.

OUR PHILADELPHIA LETTER.

(From Our Own Correspondent.)

CLINICAL LECTURE—UNIVERSITY HOSPITAL.

H. C. WOOD, PROFESSOR OF THERAPEUTICS.

Gentlemen,—We will first consider this morning the treatment of the present prevailing epidemic. This treatment does not differ from that pursued in a rational consideration of an ordinary "cold" in its various ramifications, bronchial, laryngeal, nasal, pulmonary and constitutional. At the beginning of an attack I prefer to order pilocarpine in the following manner: dissolve one-half grain of the drug in one-half ounce of water; giving a teaspoonful of this every fifteen minutes until a drenching sweat is produced; this breaks the fever and relieves the other symptoms, care being taken of course that no exposure occurs after or during this treatment. In addition quinine and strychnia can be added; tonics are indicated if there is much depression or exhaustion. The lung symptoms if present must also be attended to; for this purpose a weak mustard plaster over the chest is often sufficient; the object being to establish a gentle counter-irritation. For a cough mixture, muriate of ammonia in brown mixture is an excellent thing; the muriate being about the only one among the older expectorants which still holds the confidence of the profession. Better still is the combination of apomorphine with the muriate of ammonia; apomorphine is one of the best exporants, especially to re-establish secretion; one-fifteenth of a grain in brown mixture can be used to great advantage. Of course with this treatment it will be necessary for the patient to remain at home for two or three days.

Our first case is that of a woman complaining of paroxysmal pain; this patient has been before us before and we diagnosed her case as probably of rheumatic origin. This pain began in the occipital region, extended over the head, down the body to the abdomen, associating with itself sick

stomach. The pain is dull in character, is not concentrated at any point and exhibits but little tenderness on pressure. She was put on the salicylate of soda, but the results are not encouraging: the pains still persist and she feels no relief. The pains have spread out somewhat and are in the body rather than in the head; she complains now of feet-pains. It is always well in treating a case of supposed rheumatic origin to remember the gouty diathesis which is closely allied. Some cases of rheumatism which find no relief in the salicylates, often are benefited by colchicium, and *vice versa*, cases not improved by colchicium are favorably impressed by the salicylates. It is often necessary to recall this fact, there seems to be no way in which to know or learn the cases which will be benefited by each treatment beyond that of actual experiment. In the gouty diathesis in Americans there is generally tenderness on deep pressure over the small bones of the arch of the foot; in this country the classical great toe-symptom is lacking generally. We will try rest in bed in this case with the administration of the wine of colchicium.

The next case comes to us with the simple history of "head-ache." In such a case it is necessary to determine the cause by exclusion. It will be essential to go over the list of possible causes. I remember a case of Bright's which came to me with the history of constant, intolerable pain in one temporal region; this was all noted by the patient. An examination of the urine revealed the presence of kidney trouble which had been unsuspected by the attending physician, simply because he failed to examine the case thoroughly. Our patient here, a woman, has tenderness on pressure over the eye-ball, she is dizzy at times; has palpitation on slight exertion, is nervous, but sleeps well. She had her ovaries removed some time ago. Her appetite is good but her bowels are costive. Now let us take up the various causes in a systematic order which would produce her headache. Firstly, then we have reflex causes; these are most common. In the majority of cases they are due to eye-strain; as often they are reflex from nasal trouble. The character of the headache decides much for us; but the only satisfactory way of determining the point element is to have an examination made by an oculist. Headache due to nasal sources is generally referred to the region of the frontal sinuses and may be of any form. Uterine or ovarian diseases may register itself in headache. Inquiry in regard to this element is always essential in female cases. The next great cause of headache is local disease. Heart disease is a common factor in producing this symptom, especially among children. Constitutional poisons generate headaches; always inquire into the habits and businesses of these cases. Excessive tea or coffee drinking, or the excessive use of alcohol or tobacco, are very frequent producers of this symptom. Uræmia, rheumatic poison, lead and syphilis should also be remembered. I believe however, that syphilis does not produce headache without producing at the same time organic disease. Organic brain disease also produces headache; brain tumors, pachymeningitis, syphilitic gummata, tubercular trouble, sunstroke are all factors bringing on prominent distressing headaches. Then again there are a set of headaches for which we can find no cause; to these we give the name of "essential headaches." They seem to be the outcome of some peculiar nervous force which we are at present unable to appreciate.

In this case the woman thinks her head trouble is increased by reading; she has no discharge from the nose; uterine and ovarian trouble has been excluded. Her eyes have yet to be examined, but if her headache is reflex it is due to this source. She is not addicted to excessive tea or coffee-drinking or alcohol, and her urine seems to be normal. However, never trust to "seems;" it should be examined. There may be no albumen present; but in many cases I have seen of uraemia, a persistent, low, specific gravity has been the only symptom. Rheumatic headache is very common, but here there is no distinct history of such trouble; nor is there any more distinct trace of syphilis. Her heart is normal and there is no sign of brain trouble; no loss of memory; no change in nature; no sunstroke or other cephalic disturbance. Rarely it is, I think, that headaches are due to gastro-intestinal disturbances; here her appetite is good, although she occasionally has acid risings from her stomach. Now let us imagine that she is a patient in our office; what will we do for her? First send her to an oculist to have her eyes examined, examine at the same time her urine; try if you wish the rheumatic

treatment or gastro-intestinal treatment. Remember her bowels are inactive, and she has a little acid dyspepsia frequently; a mercurial laxative or a pill containing calomel and ipecac or aloes and podyphyllin, or silver nitrate with hyoscyamus, may give happy results.

Next we have a man with partial loss of power in his right arm. Do not attempt to jump at conclusions in such a case; begin with general ideas and terms. In the first place it is a paresis; a loss of power. It is monoplegic paresis, because one limb is alone affected. The man feels well, he can say "a" distinctly; but has a rather slow response to pin pricks over the affected area. In getting him to squeeze my hands I find that the grip is about the same in both hands. Now that we have reached monoplegia, let us think what forms of this paresis we have; there are two natural divisions, organic and functional. A better term for functional is hysterical monoplegia. The man looks and acts anything but hysterical. So we can eliminate this division. Now do not attempt to sort over the various forms of organic monopolies in a vain, unscientific effort to find one that fits your case, but go at the matter with intelligence and precision. There are two forms of organic monoplegia, central and peripheral. The central are in the brain; where? Almost always in the motor cortex; because in the cortex the nerve fibres are spread out more than in the deeper portions, and a lesion has less chance to affect great groups of muscles than in the deep brain where the fibres are in close contact. The peripheral monoplegias are either in the cord, the nerve trunks or in the muscles. We distinguish these lesions as follows: if the change is in the cord there is a change in the electrical re-action, due to the fact that the trophic centres are involved. In the brain, there is a certain loss of power with little or no wasting, as we find here. The lesion in the nerve expresses itself by tenderness over its course, while the wasting is greatest if the lesion is in the cord, as the trophic centres of the nerves are the last to succumb. There is a class of organic monoplegias, in which there is a partial loss of power dependent on exclusive use, the so-called "business neuroses," such is the scrivener's palsy. These are readily distinguished by the simple fact that it is only in certain actions that power is lost; for example, inability to write when a knife or axe can be used with perfect facility. We will let you consider for yourselves under what form our present patient falls.

To the Editor of the CANADA LANCET.

SIR,—I have read with much interest the letter of Dr. W. T. Harris, in this month's LANCET, and heartily concur with him in his remarks regarding Medical Education. It is time the Profession took active means to oppose the continuance of the injustice at present being done by the Ontario Government to the independent medical colleges, to those outside the medical department of the Provincial University. Further remarks are unnecessary, the wrong being so palpable. I merely desire to be one more to record my protest.

Yours, etc.,

WM. GEDDES STARK.

amilton, Ont., Feb., 1890.

Selected Articles.

REPORT OF THE SECOND HYDERABAD CHLOROFORM COMMISSION.

(Concluded from March No.)

(34) On another occasion, during Experiment 117, the animal was very nearly killed by a comparatively short inhalation of chloroform, owing to the electrodes becoming accidentally short-circuited and failing to keep up the irritation of the vagus. Something similiar occurred in Experiment 117, the effect of the irritation of the vagus passing off while the chloroform was still being pushed, and thus putting the animal into a condition of extreme and unexpected jeopardy. Nothing could be more striking than these near approaches to accidental death from failure to irritate the vagus efficiently.

(35) Other Experiments were made to test the truth of the statement that chloroform increases the action of electrical stimuli applied to the vagus, and showed conclusively that it has no such affect. In one instance only the inhibition seemed to be intensified as the chloroform was commenced, and diminished when it was discontinued; but apart from the fact that the supposed effect ceased much too suddenly, a repetition of the experiment on the same and other animals showed that there was in reality no such affect. The increased inhibition in this instance was due to the chloroformist compelling the attendant who was holding the electrodes to change his position, and thus making him unconsciously apply them more efficiently.

When the chloroformist withdrew they were restored to their former position. This affords an instance of the care that has to be taken in making experiments if one is not to be deceived.

(36) To test the effect of shock due to vasomotor change rather than affection of the heart, Goltz's experiment on the frog was repeated on three dogs. In one there was slight lowering of pressure, which was not extensive, and in the others no affect was produced at all. Other operations which seemed likely to produce shock, such as violent blows upon the testile, were singularly devoid of effect. Failing to lower blood pressure by any of these methods, recourse was had to section of the splanchnics; but the low condition of blood pressure this produced appeared, like stoppage of the heart from vagus irritation, to be a source of safety rather than of danger during chloroform adminstration. In this connection Experiment 111 may be studied. There was not much external hæmorrage, but the splanchnics were divided—a proceeding which as is often said, bleeds the animal into his own vessels. The pressure was after this extremely low, but chloroform was repeatedly given and various other actions taken, and then chloroform had to be pushed on a saturated sponge enclosed in a cap for eleven minutes before respiration ceased.

(37) The conclusion, then, is this: Chloroform has no power of increasing the tendency to either shock or syncope during operations. If shock or syncope from any cause does occur, it prevents, rather than aggravates, the dangers of chloroform inhalation.

(38) The experiments on dogs that had been dosed with phosphorus for a few days previously show that the fatty and consequently feeble condition of the heart and organs so produced has no effect in modifying the action of chloroform. The ease with which vagus irritation and the Glasgow trace could be produced in these animals, by even slight degrees of asphyxia, was very remarkable; but this was equally the case in dogs that had been given phosphorus only a few hours before the experiment, and whose organs were not yet fatty. Many of these cases were in the last stage of phosphorus poisoning, and several of their companions died without any experiment having been performed on them before or on the same day as they died. (*vide* the low state of blood pressure in Experiment 63). Numerous attempts were made in these animals to produce shock by operations in the recumbent and vertical positions, but without any more result than in those that were healthy.

(39) The truth about the fatty heart appears to be that chloroform *per se* in no way endangers such a heart, but, on the contrary, by lowering the blood pressure, lessens the work that the heart has to preform, which is a positive advantage. But the mere inhalation of chloroform is only a part of the process of the adminstration in practice. A patient with an extremely fatty heart may die from the mere exertion of getting upon the operating table, just as he may die in mounting the steps in front of his own hall door, or from fright at the mere idea of having chloroform or of undergoing an operation, or during his involuntary struggles. Such patients must inevitably die occasionally during chloroform adminstrations, and would do so even were attar of roses or any other harmless vapour substituted for chloroform.

(40) The effect of hæmorrhage was tested by opening the femoral artery and allowing a considerable quantity of blood (eight to twelve ounces) to escape. An immediate lowering of the blood pressure results, and this is very slowly recovered from. Such an accident, however dangerous it may be in itself, in no way effects the action of the chloroform, except in so far that a patient who has been nearly bled to death would require less chloroform in his system to put him into a state of anæsthesia. The low condition of his blood pressure produced by the hæmorrage would tend to prevent the too rapid intake of chloroform, exactly as in the case of cutting the splanchics.

(41) When the hind feet are lowered on to the floor so as to place the animal in the vertical position, a considerable fall of blood pressure in the carotid artery occurs; but when the animal is replaced on the table in the recumbent position the pressure is fully restored. Various operations were performed on animals in the vertical position, but in no case was anything resembling dangerous shock produced. Inversion of the body, so that the animal stands on its head, has exactly the opposite effect, the pressure rising in the carotid artery, and again falling to its former state when the animal is replaced in the horizontal position. Inversion of the body, failed to restore an animal that was in the last stage of chloroform poisoning, though it raised the pressure in the usual way as long as it was continued. The change in the pressure of the blood of the carotid, which occurs when the position of the body is changed, appears therefore to be due simply to the effect of gravity.

(42) As regards the effect of chloroform upon different animals, it may be said to be the same as far as its anæsthetic action is concerned. There are certain peculiarities in its effect on the respiration and circulation connected with its local irritant action on the nostrils and fauces which are interesting to notice. Thus, when concentrated chloroform vapour is applied to the nostrils of rabbits, they hold their breath, and the heart's action is slowed at once. This is always said to be due to reflex inhibition of the heart from irritation of the nasal branches of the trigeminus reflected through the vagus, and is by no means peculiar to chloroform, but is produced equally by any irritant vapour, such as ammonia or acetic acid.

(43) In some dogs, and especially in those to which phosphorus had been given stoppage of the respiration and slowing of the heart occurred immediately after the application of the chloroform to the face, or on forcibly pulling out the tongue, and this suggests that the mechanism of cardiac arrest in them is precisely the same as it is in the rabbit. On the other hand, in rabbits, as in all other animals, it is possible to give chloroform so gently that no spasm of the chest occurs, no reflex effect is produced, and then the pressure falls in the same regular curve and with the same succession of phenomena (anæsthesia, cessation of the respiration, and lastly cessation of the heart beat) that was above described as typical of chloroform inhalation.

(44) Goats have a great tendency to hold their breath while inhaling chloroform, and monkeys resemble dogs rather than rabbits, as when ammonia was held before a monkey's nose (Experiment 98) it did not cause immediate stoppage of the respiration and heart as it does in rabbits.

(45) The experiments with ether show that it is impossible to produce efficient anæsthesia with this agent unless some form of inhaler is used which thoroughly excludes the air. If an ordinary cap containing a sponge saturated with ether is applied very closely to the face, the animal generally holds its breath and struggles, and we at once get the fall of blood pressure and slowing of the heart that invariably occur under these circumstances. If the ether is continued in this way after the animal has recommenced breathing a condition of semi-anæsthesia results, in which the cornea is sometimes sensitive and sometimes insensitive, and the pressure rises and falls alternately to a slight amount and forms a wavy trace, which may be continued right round the drum without any particular change. As soon as air is rigidly excluded, the pressure commences to fall gradually exactly in the same way as with chloroform, and with the same succession of phenomena—viz., first anæsthesia then cessation of the respiration, then of the heart movements, and finally death. How far this is due to ether and how far to the results of asphyxia it is impossible to say, but an exactly similiar succession of events can be brought about by making the animal inhale carbonic acid gas alone.

(46) If surgeons choose to be content with a condition of semi-anæsthesia, it can no doubt be produced with perfect safety, though with discomfort to the patient, by ether held rather closely over the mouth. Such a condition of imperfect anæsthesia would never be accepted by any surgeon accustomed to operate under chloroform. If more perfect anæsthesia is required, it can be procured by excluding air more rigidly, but then there is exactly the same danger as in giving chloroform. How very suddenly and rapidly the pressure may fall and death ensue is well shown by Experiment 33. Ether injected into the jugular vein produces a fall of blood-pressure and anæsthesia in the same way as chloroform does, but in all cases in which it was so injected large clots were found in the heart immediately after death. It is interesting to note that Claude Bernard seems to have formed a very similar opinion with regard to ether, as the following quotations from his work entitled "Leçons sur les Anesthésiques et sur l'Asphyxie," published in 1875, show. The first quotation (p. 50) is as follows:—"Aussi, un certain nombre de chirurgiens proposèrent ill d' abandonner le chloroforme pour revenir à l'éther dont l'usage paraissait moins à craindre. Aujourd'hui encore les chirugiens de Lyons emploient préférablment l'éther. On croyait le chloforme plus dangereux que l'éther parce qu'il était plus actif ; mais, en réalité, la fréquence relative des accidents par le chloroforme tentait peut-être tout simplement à ce que c'était cet agent anesthésique qu'on employait dans l'immense majorité des cas. Plusieurs discussions ont été pro- et il a été constaté que l'éther, lui aussi, avait provoquées par les partisans de l'ether surtout par les représentants de l'école de Lyons, duit un certain nombre d'accidents mortels. Les deux agents anesthésiques usités peuvent donc, l'un comme l'autre, entrainer quelques risques de mort, et la chirurgie humaine a conservé presque partout le chloroforme, dont l'action est plus rapide et plus complete." The second quotation, to be found on p. 101 of the same work, runs:—"Quant à l'éther et au chloroforme, leur action est à peu près la même au point de vue physiologique, sauf une difference d'intensité en faveur du chloroforme, ce qui nous fera généralement employer ce dernier corps de préférence à l'éther."

(47) The A. C. E. mixture given gently with plenty of air and the other conditions mentioned before under chloroform produces the typical chloroform trace. Given freely to a struggling animal, it can produce a very rapid and dangerous fall of blood pressure. In Experiment 52. Fig. 4 shows very perfectly the effect on the heart of holding the breath.

ACCIDENTAL DEATHS.

31. The notes of the cases of accidental deaths that occurred during our experiments have been left amongst the other notes in the position in which each occurrence took place, and they can be readily found by a reference to the index. The fatal result was brought about either by neglecting to watch the condition of the respiration during or after the adminstration of chloroform, especially while the carotid artery was being exposed, or from a reckless adminstration of chloroform in the endeavor to check or prevent struggles. In all the cases of accidental death the usual chloroformist was absent, and no one was attending to the chloroform. The notes would have been more complete

if someone could have watched the condition of the animal and noted the gradual but unheeded cessation of respiration without calling attention to it. As it is, one has to be content with the remark that the breathing was noticed to have stopped at some particular time ,but there is nothing to throw any light upon the condition during the important period that immediately preceeded this discovery. A similar hiatus appears in the account of accidental deaths in the human subject, and is unavoidable. These cases are probably identical with the instance referred to by Snow "in which animals died in a sudden and what was thought unaccountable manner whilst chloroform was given to prevent the pain and struggles which would be occasioned by physiological experiments." The death was not really sudden, but only rapid, and the result of reckless adminstration of concentrated vapour in the first instance, and careless neglect of the condition of the respiration in the second. There is no evidence whatever that a single one of them was due to paralysis or sudden stoppage of the heart, as Snow assumes to have been the case.

32. It must be remembered, in studying the tracings, that except when it is expressly stated to the contrary, chloroform was throughout administered very freely. The degree and rapidity of the fall of blood pressure are almost in all cases much greater than should be the case in administering chloroform to human beings. To avoid complicating the notes, the inhaler was kept on much more persistently, with none of those little interruptions while the cornea is being examined etc. which always occur in practice. The whole series, with few exceptions, may be charactised as examples of reckless administration of chloroform, and accidental deaths would have been much more numerous had it not been that, when once the animal was connected with the manometer, it was kept under the most careful observation. Experiment 79 affords a most interesting exception. The chloroformist, though present in body, was absent in mind, and failed to observe and report the cessation of the respiration, The chloroform was, in consequence, pushed much further than it should have been, and the animal died sooner than was intended.

33. These cases are of themselves quite sufficient to show that animals are just as liable to death from the careless administration of chloroform as human beings ; and the accidental deaths which occurred during the experiments of the Commission afford the best possible proof that the effects of chloroform are identical in the lower animals and in the human subject. The statement so frequently made, that dogs are more resistant to chloroform than human beings, is entirely incorrect.

Practical Conclusions.

4. The following are the practical conclusions which the Commission think may fairly be deduced from the experiments recorded in this report :—

I. The recumbent position on the back and absolute freedom of respiration are essential.

II. If during an operation the recumbent position on the back cannot, from any cause, be maintained during chloroform administration, the utmost attention to the respiration is necessary to prevent asphyxia or an overdose. If there is any doubt whatever about the state of respiration, the patient should be at once restored to the recumbent position on the back.

III. To ensure absolute freedom of respiration, tight clothing of every kind, either on the neck, chest, or abdomen, is to be strictly avoided; and no assistants or bystanders should be allowed to exert pressure on any part of the patient's thorax or abdomen, even though the patient be struggling violently. If struggling does occur, it is always possible to hold the patient down by pressure on the shoulders, pelvis, or legs without doing anything which can by any possibility interfere with the free movements of respiration.

IV. An apparatus is not essential, and ought not to be used, as, being made to fit the face, it must tend to produce a certain amount of asphyxia. Moreover, it is apt to take up part of the attention which is required elsewhere. In short, no matter how it is made, it introduces an element of danger into the administration. A convenient form of inhaler is an open cone or cap with a little absorbent cotton inside at the apex.

V. At the commencement of inhalation care should be taken, by not holding the cap too close over the mouth and nose, to avoid exciting, struggling or holding the breath. If struggling or holding the breath do occur, great care is necessary to avoid an over-dose during the deep inspirations which follow. When quiet breathing is ensured as the patient begins to go over, there is no reason why the inhaler should not be applied close to the face ; and all that is then necessary is to watch the cornea and to see that the respiration is not interfered with.

VI. In children, crying ensures free admission of chloroform into the lungs ; but as struggling and holding the breath can hardly be avoided, and one or two whiffs of chloroform may be sufficient to produce complete insensibility, they should always be allowed to inhale a little fresh air during the first deep inspirations which follow. In any struggling persons, but especially in children, it is essential to remove the inhaler after the first or second deep inspiration, as enough chloroform may have been inhaled to produce deep anæsthesia, and this may only appear, or may deepen, after the chloroform is stopped (*vide supra* sub-paragraphs 2 and 9 of conclusions in paragraph 30). Struggling is best avoided in adults by mak-

ing them blow out hard after each inspiration during the inhalation.

VII. The patient is, as a rule, anæsthetised and ready for the operation to be commenced when unconscious winking is no longer produced by touching the surface of the eye with the tip of the finger. The anæsthetic should never under any circumstances be pushed till the respiration stops; but when once the cornea is insensitive, the patient should be kept gently under by occasional inhalations, and, not be allowed to come out and renew the stage of struggling and resistence.

VIII. As a rule, no operation should be commenced until the patient is fully under the influence of the anæsthetic, so as to avoid all chance of death from surgical shock or fright.

IX. The administrator should be guided as to the effect entirely by the respiration. His only object, while producing anæsthesia, is to see that the respiration is not interfered with.

X. If possible, the patient's chest and abdomen should be exposed during chloroform inhalation, so that the respiratory movements can be seen by the administrator. If anything interferes with the respiration in any way, however slightly, even if this occurs at the very commencement of the administration, if breath is held, or if there is stertor, the inhalation should be stopped until the breathing is natural again. This may sometimes create delay and inconvenience with inexperienced administrators, but experience will make any administrator so familiar with the respiratory functions under chloroform that he will in a short time know almost by intuition whether anything is going wrong, and be able to put it right without delay before any danger arises.

XI. If the breathing becomes embarrassed, the lower jaw should be pulled, or pushed from behind the angles, forward, so that the lower teeth protrude in front of the upper. This raises the epiglottis and frees the larynx. At the same time it is well to assist the respiration artificially until the embarrassment passes off.

XII. If by any accident the respiration stops, artificial respiration should be commenced at once, while an assistant lowers the head and draws forward the tongue with catchforceps, by Howard's method, assisted by compression and relaxation of the thoracic walls. Artificial respiration should be continued until there is no doubt whatever that natural respiration is completely re-established.

XIII. A small dose of morphia may be injected subcutaneously before chloroform inhalation, as it helps to keep the patient in a state of anæsthesia in prolonged operations. There is nothing to show that atropine does any good in connection with the administration of chloroform, and it may do a very great deal of harm.

XIV. Alcohol may be given with advantage before operations under chloroform, provided it does not cause excitement, and merely has the effect of giving a patient confidence and steadying the circulation.

25. The Commission has no doubt whatever that, if the above rules be followed, chloroform may be given in any case requiring an operation with perfect ease and absolute safety so as to do good without the risk of evil.

EDWARD LAWRIE, (President),
T. LAUDER BRUNTON,
G. BOMFORD,
RUSTOMJI D. HAKIM,
} Members.
EDWARD LAWRIE, Surgeon-Major.

Hyderabad, December 18th, 1889.

(True copy.)

A DISCUSSION ON FOODS FOR INVALIDS AND INFANTS.

In accepting the invitation you were so good as to address to me, that I should open a discussion in this important Section on the subject of foods for invalids and infants, I felt that you had asked me to deal with an unusually wide and comprehensive, although undoubtedly a most interesting and practical subject, and one which is very intimately associated with recent progress in therapeutics.

The subject is, however, so large, and extends over such a very wide field, both of observation and experiment, that I must ask you to allow me to remain strictly within my *rôle* of "introducer," and to content myself with pointing out a few topics which appear to me to be especially suitable for discussion in this Section, adding here and there a few observations of my own with the view of stimulating or provoking further expressions of opinion from those who may be able to throw more light on the questions involved than I am.

The connection between invalids and infants may not appear to some minds to be a very close one, and if I had had my own choice in this matter, I might perhaps have been disposed to "drop the infant," for my acquaintance with infancy is entirely uninterested and impartial, and is not complicated by claims of ownership. But if I cannot claim that direct and intimate association with the state of infancy which so many of you are, no doubt, able to do, I may, perhaps, for that very reason, be able to take a more calm and dispassionate view of its wants and its weaknesses.

There is, however, this very important connection between invalids and infants—namely, that they are commonly dependent on others for the provision or selection of their food, and it is for this reason, I presume, that we are invited to consider their food wants together.

And, first, with regard to the feeding of inva-

lids, I would suggest that we should consider chiefly the foods most suitable to be given in acute febrile diseases; for if we allow ourselves to wander into the question of the dietetics of chronic disease, including such questions as the diet most appropriate in diabetes, albuminuria, uræmia, phthisis, scrofula, anæmia, diseases of the digestive organs, of the heart, etc., we shall be overwhelmed with the magnitude of our subject.

Food in Acute Disease.

We all remember the remarkable words of the late Dr. Graves, of Dublin: "Lest when I am gone you may be at a loss for an epitaph for me, let me give you one in three words, 'He fed fevers.'" Since the time when these pregnant words were uttered there has been little inclination displayed by physicians in this country to go back to the starving methods of some of Graves's distinguished predecessors or contemporaries. Yet it can hardly be doubted that the conclusion arrived at by some of the older physicians, that the free administration of food in fever occasionally intensified the febrile process, rested on some basis of practical observation; and we do not, in the present day, altogether lack occasions of observing that the indiscreet administration of food in acute diseases, food unsuitable either in quality or quantity, is distinctly injurious.

No one can be more willing than I am to recognize the necessity and importance of administering a sufficiency of food to febrile patients, especially with the object of lessening or compensating for that tendency to destruction of tissue, which is one of the most serious consequences of fever; but I am at the same time convinced that, especially in large public institutions where patients are nursed *en bloc*, the free administration of food and alcoholic stimulants is far too much a matter of routine, and sometimes partakes more of predetermination than discrimination. I have seen a nurse, a competent but very firm lady nurse, stand with teeth set and lower jaw advanced, and every firm outline of her muscular frame breathing forth unyielding determination, over a fever patient, and forcibly thrusting down his throat, an easy conqueror in this unequal struggle, the detested hourly "feed" of black beef-tea, mixed with cheap port wine (for what public institution ever uses anything but cheap port?). The poor fevered l[illegible]s and parched tongue are craving all the time f[illegible] "a cup of cold water," which is denied them, e[illegible]her because the patient is not sufficiently con- s[illegible]ous of his wants to ask for it, or because "the d[illegible]tor has not ordered it."

[illegible] would plead, then, for more discrimination a[illegible] less of routine in the feeding of fever patients. a[illegible] I would suggest for consideration the fact t[illegible] t food undigested only serves to intensify the f[illegible]ile process and adds to the distress of the patient, and that in administering condensed solutions of nitrogenous extractives we may incur the danger of adding to the already large accumulation of nitrogenous waste in the blood. I would also put this question to the medical officers of hospitals: Are you satisfied that those cheap and common qualities of wines and spirits, almost universally used in such institutions, a single glass of which many of us here in sound health would wisely fear to take, are you satisfied that they do not also injuriously affect the fever patient, who, moreover may have been entirely unhabituated before the attack to the use of such beverages?

We feed fevers and we are undoubtedly right in so doing. Bauer and Künstle appear to have established, by careful observations on the diet of typhoid patients, the fact that a due "supply of albuminous food to a fever patient" effects a saving of albumen in the body, "for though the excretion of nitrogen is increased, the loss of the same element from the system is reduced." But do we not sometimes overfeed fevers, and use less discrimination than is desirable in the kinds of food we administer?

It has appeared to me that we may formulate two chief rules which should guide us in the feeding of cases of acute disease: 1. Endeavor to utilize food to the greatest extent that is safe and possible for the purpose of checking the waste of tissue which is associated with the febrile process. 2. Be careful to administer no food that cannot be readily absorbed and assimilated. Do not overlook the fact that the functions of the digestive organs are gravely impaired during fever, and, therefore, if we give food which the patient is unable to assimilate, this undigested food will decompose in the stomach and intestines, and cause much local irritation and augment the pyrexial movement.

I have been accustomed to teach, and I submit that teaching to your criticism, that in acute and short typical and febrile attacks, such, for instance, as one of acute croupous pneumonia of average severity and running an average course, we should not manifest any anxiety as to the taking of much food, unless in the aged and feeble, for by forcing the consumption of a considerable quantity of food in such cases, in the absence of all appetite, and with obvious febrile derangement of the digestive organs, we do more harm than good.

There is a general consent amongst all authorities that, owing to the interruption of normal gastric digestion in fever, all food should be given in the fluid form, that is, in a form that can be readily and immediately absorbed, that it should be given in small quantities and at short intervals. The two kinds of fluid food most commonly used in cases of acute disease are, first, milk, and, secondly beaf-tea, and under the latter denomination I would be asked to be allowed to include all fluid

meat extracts, broths, soup, meat juices, etc. The consideration of both these forms of food will probably yield some suitable topics for discussion.

The very great convenience of milk as a food has, I think, acted, in a certain sense, as a snare, for there is a tendency especially with nurses, to think no evil of that which is so handy, requires no preparation, and gives so little trouble. But the great drawback in the use of milk in acute disease is the fact that, although a fluid food out of the body, it becomes a solid food in the stomach or intestine. No doubt it is an excellent food in all cases in which it is well tolerated and quickly digested and absorbed, but there are many cases in which it is not so, and when these happen to be cases of typhoid fever very serious injury may be done the patient if this pecularity is not observed. I have seen several cases of typhoid in which the administration of milk has not appeared to cause any gastric disturbances, but yet has produced great intestinal irritation, and the motions have been largely composed of firm milk curd. One of the reasons why milk so frequently disagrees with patients is that it is given in too concentrated a form and in too great quantity.

Sir Henry Thomson has called attention to the absurd custom, now so prevalent, of using milk as if it were a simple beverage, and to drink it like water, with quantities of solid meat and other food. Why should we hesitate to dilute the milk we give to fever patients? They require water, pure water, in much larger quantity than they usually get, and yet we hesitate to mix water with the milk we give them. Their digestive powers are excessively feeble, and yet we will give them concentrated foods! When we wish to rely on milk as a food in acute disease we should give it in small quantities at a time at short intervals, mixed with water, or, better, with an alkaline water, such as Vichy or Apollinaris. I am accustomed in hospital practice to prescribe powders, each containing 20 grains of bicarbonate of soda and 20 grains of common salt, and to direct that one such powder should be added to every pint of milk, and this is to be diluted when administered, with an equal quantity of water. Two ounces of milk and two ounces of an alkaline water every hour (and a fever patient requires a drink every hour) will give the patient two pints and a half of milk a day. I am, of course, thinking of cases in which the digestion of milk is difficult.

Greater use ought also to be made of whey in those in cases which milk is not digested readily. I have often used it in private practice and in hospital with great advantage. It can be prepared in a pleasant form by boiling a pint of milk with two or three teaspoonfuls of lemon-juice, and a few fragments of lemon peel for the sake of flavor; if the curd be well broken up, then strained through muslin, and all the fluid pressed well out of the curd, much of the cream and some of the finely-coagulated casein will pass into the whey, which will thus become a fairly nutritive fluid. If necessary, it can be made more nutritious by the addition of meat juice. Or if an egg be whipped up with twice as much boiling water, added slowly and then strained, a fluid will be obtained holding in suspension a considerable quantity of albumen coagulated in fine particles, and this may be added to whey (or to beef-tea), thus supplying the defective albuminate.

I must not dwell longer, however, on milk. I merely make these suggestions with the view of eliciting further observations. I will ask you at the same time to consider the use of "butter-milk" as an invalid food, not so largely used in this country as in Germany, but calculated, I believe, to be of service in many cases of gastric difficulty. It is highly acid from the presence of lactic acid, and it contains the casein of milk in a very finely divided form. I have known dyspeptic patients live upon it in comfort for considerable periods at a time, taking only a little thin water biscuit besides.

Another form of fluid food very extensively used in cases of acute disease is "beef-tea;" this term is usually applied to very strong extracts of beef, and this fluid is generally estimated in exact proportion to its concentration. Why, I have never been quite able to understand. As I have already said, a patient with pyrexia requires and should be given much water; why not give him some of that water with his beef extract? The intense dislike of beef-tea which many patients manifest is especially directed to this very concentrated form. It is mere slavery to routine—mere want of rescource—that has perpetuated the invalid's sad restriction to milk and beef-tea. Conceive the dread monotony of a six or seven weeks' limitation to these two articles of diet. Now there are many forms of meat infusion or meat extracts that can be rendered very palatable by suitable care in preparation, infinitely better adapted to serve as foods in pyrexial cases than strong beef-tea. Well-made mutton, veal, and chicken broths to which some well-strained oatmeal or barley gruel can be occasionally added, make excellent invalid foods. They contain in a dilute form the same constituents, and, with the additions I have named, even more nutritive alimentary principles than beef-tea. But clear soups—*consommes*—are exceedingly agreeable, readily absorbable, and stimulating foods, and they usually contain some vegetable juices and salts which greatly add to their food value.

Sir William Jenner some time ago directed the attention of the profession to the remarkable oversight so frequently practised in the feeding of cases of fever, of the omission of vegetable juices from their dietary. It is quite easy to obtain the

juice of fresh boiled vegetables and savoury herbs, and too add it to these clear animal soups. "Fruit soups" are used in Germany, and are made by boiling fresh or dried fruits with water, expressing the juice and straining.

I am not one of those who think ill of beef-tea as an invalid food, but I object to making either beef-tea or milk the universal invalid food, and I see no reason why we should desire to use such very concentrated beef-teas, when we know that fever patients need so much water. I regard beef-tea as an excellent stimulant and restorative, as it contains very little, if any, albuminates in solution. But it contains gelatin, which is very readily digested, and appears to serve as an "albumen-sparing" food in the body, as well as saline and stimulating extractives.

I was greatly surprised a short time ago on being told by a hospital sister, that in the hospital she nursed in they were forbidden to put any salt into the food of the typhoid patients. Surely this was a very unwise regulation. If chloride of sodium is so important in health, may it not be quite as important in disease?

Dr. Lauder Brunton has hinted, in one of his suggestive papers, that beef-tea may occasionally contain peptones, which by passing directly into the general circulation, act as poisons; and he asks the question "whether beef-tea may not very frequently be actually injurious, and whether the products of muscular waste which constitute the chief portion of beer-tea or beef-essence, may not under certain circumstances be actually poisonous?' I leave you to answer this question, contenting myself with remarking that I have never encountered a case of "beef-tea poisoning." And this brings me to another consideration, and that is the administration of peptonised or predigested foods to invalids. I must leave this large subject mainly in your hands, or I should have to occupy far too much of the time available for this discussion. I will simply remind you that it has been authoritatively suggested that "digestive ferments," and "artificially digested foods" "may be edged tools and capable of doing harm as well as good." But with you, sir, to direct us in a subject you have made so peculiarly your own, we can scarcely go wrong.—I. Burney Yeo, M.D., F.R.C.P.,in *Brit. Med. Jour.*

(*To be continued.*)

TREATMENT OF MEDICAL EMERGENCIES.

The surgical emergency has been the subject of numerous addresses and papers, but the medical emergency has rarely, if ever, received systematic consideration. Yet the instances in which it demands treatment are scarcely less numerous than in the case of the former.

In the *University Medical Magazine* for January, 1890, Professor Tyson contributes a valuable paper as to the treatment of the more frequent medical emergencies, of which the following abstract represents the most important points:

Under the head of the treatment of medical emergencies, Dr. Tyson refers to the treatment of —*first*, syncope, or fainting; *second*, the apoplectic seizure; *third*, the convulsion, whether caused by epilepsy, Bright's disease, peripheral irritation, or hysteria; *fourth*, lung hæmorrhage; *fifth*, nasal hæmorrhage; *sixth*, gastric and intestinal hæmorrage; and, *seventh*, asphyxia or suffocation.

1. In fainting, the heart does not cease to beat, unless it be fatal syncope, but its action becomes so feeble, and the quantity of blood sent out so small, that there is not enough sent to the brain to maintain consciousness.

The symptoms of fainting are, of course, familiar to every one. In the treatment of syncope, the first step is to place the patient in a recumbent position flat on the back, with the head low. The clothing should be loosened around the neck and body, the access of fresh air should be freely permitted, and to this end persons should be kept at a distance. Diffusible stimulants, as aromatic spirits of ammonia, and brandy or whiskey, should be administered, or strong ammonia may be inhaled. Cold water may be dashed in the face, the respiration being thus excited and in turn the heart caused to beat. If recovery unsue, the heart's beat becomes more distinct, the pulse reappears at the wrist, and consciousness slowly returns. It is only in cases where the heart is too badly damaged, as where there is fatty metamorphosis of its muscular fasciculi, or its valves are badly diseased, or where too much blood is drawn off, that resuscitation fails to take place.

2. The apoplectic seizure is a most dangerous condition. Accompanied, like fainting, by unconsciousness as an essential symptom, it is due to a very different cause. There is here too much blood in the brain, either within or without the blood-vessels. In treating it the patient requires to be bolstered up, the head high, and the blood kept out of the brain as much as possible. In the true apopleptic seizure, with even a moderately strong pulse, blood is to be taken from the arm freely, sixteen ounces or more. Simultaneously an aperient, which in the absence of consciousness must be one of which the dose is small, as ⅙ of a grain of elaterium in pill or powder, or a couple of drops of croton oil in a teaspoonful of sweet oil or glycerine. A large enema, to which an ounce of turpentine is added, is useful. Ice to the head—an ice-cap—may be used. Of less service is counter irritation to the nape of the neck or the temple by a blister.

3. There is no symptom more alarming than the convulsion. Beginning with a distortion of countenance, due to clonic muscular contraction of the face muscles, which rapidly invades the entire voluntary system, and is as promptly followed by unconsciousness, the victim mostly falls heavily to the floor, although he is sometimes warned by an aura which permits him to seek a place of safety. Serious injury and even death may be caused by the fall itself.

In treatment, the first steps are measures to prevent the biting of the tongue, which is unfortunately, often too early a result to be averted, being caused by a primary and sudden closure of the jaw muscles. A piece of wood, a clothes-pin, or a cork secured so as to prevent its being swallowed, or a towel thrust into the mouth will answer the purpose. Then the patient's clothing is to be loosened, as in fainting, and he is to be restrained from such motion as may result in further injuring himself.

If the convulsion be due to epilepsy, nothing further can be done ; if due to reflex irritation, as occurs in teething in children, or are overloaded stomach, the gums should be lanced in the former instance, and vomiting secured in the latter. The difficulty is to introduce the emetic ; but irritation of the fauces by the fingers or a feather will frequently have the desired affect. Should the fit continue, a movement of the bowels should be brought about by an enema. In all cases in children, immediately after the cessation of the fit, if the bowels have not been moved during it, an aperient should be given to remove irritating matter in the alimentary canal, since this may avert a recurrence. Among such irrtiating matter are to be included the various intestinal worms.

If the convulsions are due to Bright's disease, a more active treatment is necessary. If it be perpetual nephritis, in addition to the measures taken to protect the tongue, the first step is undoubtedly to bleed from the arm, and, if the convulsions continue, chloroform should be inhaled. The same effect is often as well obtained by chloral.

Chloral is best administered by enema, and 60 grains may thus be given to an adult. If the convulsion is due to Bright's disease not occurring in pregnancy, a $\frac{1}{4}$ of a grain of pilocarpine may be injected subcuntaneously, and repeated in a few minutes if not followed by sweating ; or, if this be not at hand, a hot air bath or a steam bath.

Hysterical convulsion requires a different treatment. It is always less sudden than the epileptiform convulsion, is apt to be preceded by some premonitory symptom, such as a sense of suffocation or extreme nervousness, but there is never any danger of the patient biting the tongue. Opisthotonos is usually the characteristic form of convulsion. As regards treatment, electricity in the shape of the direct galvanic current, occasionally interrupted, or of faradization, is, however, often felt, and will generally cause the convulsion to cease. Douching the patient with cold water will likewise be usually successful.

[Inhalations of nitrite of amyl will usually arrest convulsions, no matter what be their nature, though its use in puerperal convulsions after delivery may prove dangerous by producing flooding.—Ed.]

4. Pulmonary hæmorrhages are in the main confined to tubercular consumption, occur in two different stages of the disease, and have a very different significance. They may occur early, when the blood-vessels in the neighbourhood of a tubercular infiltration, weakened by a tubercular deposit in their walls, yield to a distention from collateral hyperæmia. In such a case the hæmorrhage is rarely large, and, so far from being harmful, is often a relief to a congestion producing dyspnœa and oppression. The greatest danger is the irritation and even inflammation which may be brought about by the presence of small coagula in the bronchioles and their insufflation into still pervious air vesicles, This danger escaped, the hemorrhage is harmless.

The second form of hæmorrhage is much more serious. It occurs late in the disease, and is due to ulceration through the coats of a blood-vessel of considerable size, the vessel being either in the walls of a cavity or traversing it. Such a hæmorrhage is dangerous, and not infrequently fatal. Prompt measures are, therefore, to be taken to relieve it. The thorax should be kept raised, and absolute quiet should be observed. This is further secured by a full dose of an opiate, if it be well borne by the patient, Of interial remedies, the time-honored one of common salt is of uncertain value ; but, in the absence of anything else, may be swallowed, in the dose of a teaspoonful, repeated in a few minutes if the hæmorrhage continues. Gallic acid, in 15-grain doses every ten or fifteen minutsis, is a more rational measure, and should be substituted for the salt as soon as it can be obtained. Hypodermic injections of ergotin, in doses of 5 to 10 grains in water, may be given simultaneously, and should be repeated daily or twice daily where the tendency to hæmorrhage continues. Their object is to bring about contraction in the blood-vessels. Other astringents, such acetate of lead, in 3 grain doses, may be used under the same circumstances, as it would not be safe to use this drug in any quantity sufficient to bring about an immediate effect. The application of cold over the bleeding site is especially recommended by German clinicians, but one must be sure first of the situation, which is not easily ascertained. Sometimes the patient is able te indicate it quite precisely, at others not. Sometimes ausculation may discover suberepita-

tion over the seat of hæmorrhage. Cold should be applied in the shape of ice, in bladders or rubber-bags, so that the clothing shall not become damp, or of cloths wrung out in cold water. A more extreme measure, to be resorted to when others fail, is to throw a ligature around the larger limbs, cutting off the return of blood by the veins, while the outflow through the arteries is still permitted. Such a course will withdraw blood from the lungs and lessen the tendency to hæmorrhage.

5. Hæmorrhage of the stomach and bowels occurs usually in cirrhosis of the liver or typhoid fever. When treatment is required, tannic acid, in doses of 15 grains every ten or fifteen minutes, may be used, though even alum may be used, in the proportion of a teaspoonful to a glass of water, and taken in four doses, at short intervals.

Hæmorrhages from the lower bowel, occurring frequently in typhoid fever, are much more seri ous. They are to be treated by quiet, cold compression, or ice-bags, to the abdomen, and the use of foods of the most bland and unirritating nature. Tannic acid may be given as in hæmorrhage from the stomach, large doses being much more apt to enter the bowels.

6. Nasal hæmorrhage may be readily treated by snuffing up cold water, or a solution of alum in water, or injecting hot water into the nasal passages, and the use of ice externally. Of course, plugging the nares must be practised when all else fails.

7. The successful treatment of asphyxia depends upon the fact that the heart continues to beat long after respiration ceases, and upon this fact, too, depends the wonderful capacity for resuscitation which exists in those apparently drowned or otherwise apparently dead from suffocation. The first indication is, of course, to supply oxygen, the want of which is responsible for all the symptoms. If there is obstruction of the air-passages by a foreign body, it must be removed, or tracheotomy must be performed. If the action of the muscles of respiration is interfered with, the interfering cause must be removed. If the patient is in an atmosphere of scanty oxygen or of irrespirable gases, he must be removed to fresh open air. In slighter degrees of asphyxia, such as are seen in the new-born infant, slapping the face with the bare hand or with a wet towel, or dashing cold water upon it, will often have the effect of exciting the breathing act and of aërating the blood. If these measures are insufficient, then artificial respiration must be practised by some one of the usual methods, as that of Sylvester or Marshall Hall. In apparent drowning, faradization or galvanism of the phrenic nerve may be used, especially one pole being placed over the nerve as it crosses the scalenus muscle at the root of the neck, and the other at the epigastrium.—*Therap. Gaz.*

A CONTRIBUTION TO THE STUDY OF EPILEPSY.

Dr. Frank H. Ingram read a paper thus entitled. An analysis of 11,000 epileptic seizures, occurring in 110 patients, showed a predominance of diurnal attacks. The author said that faulty digestion, retained urine, and bad dreams were were responsible for the nocturnal fits, and that vascular weaknesses and various so-called functional disturbances could be assigned as the exciting causes of most of the others. Sudden barometric and thermometric changes, particularly the former, were potent in producing epileptic explosions. Reports of three autopsies were given, two of which showed pathological conditions in the brain which would account for the convulsions. In one case, in which the spasms invariably began in the left lower extremity, aneurysmal vessels, subcortical, were found in the leg centre of the right hemisphere of the brain. In a similar case, except that there was also a loss of hearing, there were fibrinous and caseous deposits and pressure degeneration about the leg centre in the right hemisphere, with caseous granules in the sheath of each auditory nerve. The third case showed degeneration in the posterior horns of the lateral ventricles, which, the writer said, was the only case in his experience which had shown degeneration of the so-called epileptogenic zone. The indiscriminate grouping of epileptics was condemned and conservatism in the use of the bromides commended. The writer professed a fixed disbelief in a definite pathology for epilepsy, and cited several cases showing the marked difference in the character and the sequence of the convulsive phenomena.

Dr. Starr thought it interesting to hear of the apparent relation existing between changes of barometric pressure and the frequency of epileptic attacks. There was nothing which tended to produce epileptic seizures so much as variations in arterial tone, a fact which might possibly serve to explain the matter of atmospheric influence. As regarded the pathology of epilepsy, there seemed to be no permanent lesion of the brain, and all such gross changes as had been described by Alexander, Meynert, and others, were not the direct cause of the disease. It was inconsistent with our clinical knowledge of the disorder to seek for visible pathological changes. The treatment of epilepsy differed much in its results in dispensary and in private, practice as in the former the patients were under such bad hygienic conditions. Contrasting the two classes, dispensary patients had six times as many seizures and were in other ways worse than private patients. There was much of value in the character of the aura. Dr. Ingram had reported aura in fifty per cent. of his

cases. Undoubtedly the point of departure in epilepsy was cortical, and the character of the aura gave the seat of the discharge. If the aura was visual, as in many cases, the point of origin was in the visual area. If it was auditory, a rarer phenomenon, it began in the auditory area. Although most epileptic seizures were due to cortical disturbance, such discharge might take place from gray matter anywhere in the nervous system. It was unfortunate to condemn the bromides, for, although often injurious, they gave better results than any other known drugs, when employed under proper regulations.

Dr. Herter agreed with Dr. Starr, that there there was no relation between the pathological findings in epilepsy and the disease; but nutritive changes in an unstable cortex were probably the cause, apart from any gross pathological lesions.

Dr. Fisher thought that the bromides did not interfere much with bodily nutrition, as many patients grew fat on them. They seemed to become habituated to them.

Dr. W. W. Skinner described a case in which the cutting off of the bromides had resulted fatally. The patient, a young woman, had been for some time under bromides, when she was sent to an oculist to have her eyes examined. The latter found mixed astigmatism. The bromides were cut off. After three weeks she began to have attacks of *petit mal* very frequently; they became more and more frequent, until finally she sank into coma and died. A grain and a third of morphine, in four doses, hypodermically, made no impression upon the seizures. The fits invariably began upon the right side of the body, with deviation of the head to the left and of the eyes to the right. He thought there had been a cortical hæmorrhage.

Dr. Leszynsky said that the autopsy in cases of status epilepticus yielded no result. Patients died from heart failure or respiratory failure. He believed he had saved the lives of several such patients by venesection. He had used nitrite of amyl before he knew that it was harmful. Most drugs were of no service, with the exception of chloral, which in forty or fifty-grain doses, *per rectum*, had acted well. The indiscriminate use of the bromides in epilepsy was injurious, but their careful administration was productive of satisfactory results.

Dr. Lyon had employed pilocarpine in a case with epileptic convulsions with excellent results. It produced first a profuse perspiration, after which the patient emerged from his attack. In asylums it was very common to withdraw the bromides, but he had never observed any harm follow. He had used pilocarpine also successfuly in case of of hystero-epilepsy.

Dr. Herter thought pilocarpine should always be employed with the greatest caution. He had seen it produce pulmonary œdema and death in two cases.

The President related the case of a barber who several years ago began to fall asleep when at his work, and was consequently discharged. The somnolent attacks had continued. He would fall asleep while walking or while riding on the platform of a car, and had frequent falls in the street, into gutters, on to the stove and etc., none of these things waking him up. There was no convulsion, nothing that one might call epileptic. Ten years ago he had weighed 150 pounds, now he weighed 270 pounds. Curiously enough, he was a sufferer from isomina, not being able to sleep contiuously at night for more than half an hour. Were these epileptic attacks? Was there any connection between them and the corpulence?

Dr. C. L. Dana had reported a case of epileptic morbid somnolence in a young woman several years ago. She had had at first only somnolent attacks, but afterward real epilepsy. He believed these somnolent seizures to be a form of *petit mal*. He had had a case similar to Dr. Jacoby's in conjunction with Dr. Hammond. The patient walked about while asleep, but did not hurt himself, and could be roused. The pupils were contracted as in normal sleep, and not dilated as in epilepsy. The trouble might be allied to narcolespy.

Dr. Ingram said that his routine treatment of statu epilepticus had been sixty grains of chloral *per rectum* every two hours, and this had been very successful in the majority of cases. He had also seen good results and no injury from use of pilocarpine.—*Med Record.*

SACCHARIN AS A MEANS OF ACIDIFYING THE URINE.

The mineral acids when taken into the stomach are chiefly eliminated by the intestinal mucous membrane, and the only way in which they affect the reaction of the urine is by liberating from their bases the organic acids which in the form of salts they may chance to meet in their passage through the system. The organic acids thus liberated may or may not find their way through the kidneys. As a matter of fact, they generally do not succeed in running the gauntlet. Indeed so slight is their chance of doing so that in practice, in prescribing a salt of an organic acid, we leave the acid entirely out of consideration.

The only acid heretofore employed with any degree of confidence that it would get beyond the kidneys, was benzoic acid. Even this does not reach the urine in its original form, but is converted into hippuric acid by the way. Nevertheless, it is in some degree useful in rendering the urine acid, but its action is not as certain nor as constant as might be desired.

When saccharin was first announced, it was mentioned among its properties that it was unaffected by the digestive fluids, and was eliminated unchanged in the urine. Sometime later, having had occasion to manipulate somewhat with this substance, I was struck with its strongly acid property, and it occurred to me that so decided an acid, of such a stable composition as to resist decomposition in the system and electing the kidneys as its way of exit from the body, would supply exactly the agent required for acidifying the urine.

An opportunity to put this idea to the test was afforded by a patient in my wards at the Presbyterian Hospital. This was a boy suffering with transverse myelitis, whose urine, which required to be drawn with the catheter, was ammoniacal and very offensive. A few grains of saccharin administered three times a day promptly changed the reaction of the urine to acid, and did away completely with the offensive odor. Not only so, but the irritation of the bladder became less, and the formation of pus was diminished.

Shortly after this I was in attendance upon a case of subacute meningitis in a child twenty months old. The urine which dribbled constantly into the diaper, was alkaline, and its odor though not ammoniacal, was peculiarly sickening. Every effort was made in the way of cleanliness, but the atmosphere about the bed was extremely disagreeable. Small doses of saccharin were prescribed, and immediately removed the fetor, to the great relief of the parents and attendants.

On beginning my service at the hospital, on Oct. 4th of this year, I found a young woman, aged eighteen, in the ward, who was suffering from acute cystitis, apparently induced by suppression of the catamenia and the absence of an evacuation of the bowels for seven days.

She had then been ten days in hospital. On admission, three weeks after the onset of her illness, the urine was alkaline, and contained a large amount of ropy mucous and pus. An attempt to wash out the bladder was abandoned, on account of the severe tenesmus excited. The contact of the catheter with the wall of the bladder caused hæmorrhage.

Citrate of potassa was ordered, but gave no relief. When I came on duty I found the patient in so much distress that I suspected she had introduced some foreign body into the bladder. October 13th, finding the urine very alkaline, I directed the administration of five grains of saccharin three times a day. The following day the urine was neutral, and in four days more it was acid, and contained no mucus and but very little pus. October 23rd, the urine was entirely normal, the symptoms had disappeared completely, and the patient was discharged cured.

It is probable that a part of the efficacy of saccharin in these cases is due to its being a powerful antiseptic in addition to its acid property.—A. H. Smith, M.D., in *Med. Record.*

THE HEREDITARY FACTOR IN ALCOHOLISM.

To the thoughtful medical man, who is at the same time engaged in philanthropic work, it must often be a source of encouragement when he reflects that few if any of our schemes for ameliorating the condition of our fellow men do more than touch the surface of the evil attacked, leaving their obscure and deep-seated causes to go on producing a like train of ills entirely uninfluenced by our efforts. Someone asked Dr. Oliver Wendell Holmes if it were not the fact that every disease could be cured if the doctors were called early enough? "Yes," he replied, "but early enough would commonly be two hundred years in advance." That Moorish doctor spoke like a philosopher when he prayed: "Oh God, be kind to the wicked! Thou hast been sufficiently kind to the good in making them good." We must all have sometime wished that the human race could be propagated with as much care as breeders bestow upon horses and cattle; and no thinking man of our profession can contemplate without pain the marriage of consumptives, syphilitics, neurotics, or drunkards. Especially terrible appears from recent researches, is the part played by alcoholism in heridity.

The *Progres Medical* has done the medical profession at large good service by publishing M. Paul Sollier's Aubanel Prize Essay on the "Role of Heredity in Alcoholism." A more suggestive study for the physician, and a more saddening one for the philanthropist, it would be difficult to imagine. Here is original sin in terms of modern science, and the punishment threatened in the decalogue to the "third and fourth generation" is exhibited at work in perhaps its most terrible form. By abundant and well arranged statistics M. Sollier traces the afflictions of the idiot, the epileptic, the imbecile, the hydrocephalic, the choreic and the mentally debilitated, up to the alcoholic father, mother or grandparent, in so many and such clearly marked instances that it is quite impossible to deny his conclusions from the data he gives. "Conception in a state of drunkenness of the father or the mother devotes the individual conceived to a condition so profound (idiocy, complicated frequently by epilepsy, hydrocephaly, microcephaly, etc.), so that it is condemned in general to a very short existence." An alcholic subject runs a terrible risk of conferring upon his descendants either insanity or tendency to vice or suicide or hysteria, the milder nervous disorders. The legacy of evil may miss a generation, and then appear in the next like gout.

It will generally manifest itself, if it appear in the form of dipsomania, in a taste for the same liquor as that preferred by the ancestor, and in its mildest form it will tend so to predispose the unhappy descendant to the evil of ebriety that he will find the freedom of his will in that direction seriously imperilled. The menopause more even than pregnancy seems with women a determining cause of alcoholism. Or its terrible influence may first be manifested after some nervous shock, in sickness, or with advancing age. Hereditary alcoholism has a certain likeness to dipsomania, and it is a fair ground for question whether such a proved condition does not constitute irresponsibility.—Ed. *Brit. Med. Jour.*

SOME PRACTICAL POINTS IN THE TREATMENT OF SYPHILIS.

The author is not one of those who commence specific treatment as soon as the character of the initial lesion is made out. According to him, "syphilis is not mature until the date of secondary manifestations, when the newly-formed, young, round, infecting cells are proliferated in vast quantities and are thrown into the general circulation, and by it carried throughout the body. When this has occurred, I think syphilis may be said to be 'ripe'; then, and not till then, we have something tangible to treat. At this time mercury introduced into the organism can exert its marvellous powers in destroying this, then, young, nascent, infectious material, and in causing its absorption."

He thinks we are unable to abort the disease in its first stage.

Ignoring the expectant and the spasmodic or interrupted method of treatment, the author advocates the continuous and tonic treatment of the disease. He favors the internal use of the green iodide in doses of from a $\frac{1}{4}$ to $\frac{1}{2}$ a grain three times a day in pill form, or from $\frac{1}{2}$ to 1 grain doses of the tannate of mercury, the dosage of either remedy depending on the age and robustness of the patient.

The general health of the patient must be kept at the very highest point, the soundness of the mouth, pharynx, and stomach being an object of especial anxiety.

He favors inunctions at times as a change, and particularly when cutaneous lesions are present, having satisfied himself that the local action of the remedy is salutary.

He remits treatment occasionally when a lull in virulent manifestations occurs, lengthening the intervals in the second year, when he combines his remedy with some iodide of potassium.

He believes that at times there is an advantage in bringing the application near the lesion, hence he frequently uses inunctions over or hypodermatic injections about indolent glandular enlargements, inunctions about the neck and jaws, temple and occiput, in early and late meningeal and cerebral disease, and after cleansing antiseptically mucous patches, and condylomata, he dusts them with calomel.

In some cases where rapid action is necessary, when the lesions are on the face, neck, hands, etc., the author resorts to the subcutaneous employment of the drug, but he is wisely conservative in this use of the remedy, and countenances only the employment of a soluble preparation in this way.—R. W. TAYLOR, M.D., in *Med. News.*

MEDICAL NOTES.

Many young children are irritable and cry because they have *intestinal flatus.* Instead of using opiates, which are the basis of most of the soothing syrups, Prof. Bartholow gives the following as a valuable remedy:—

℞—Misturæ asafœtidæ, . . f ʒ j.
Sodii bromid,, ... gr. iij-v.—M.

This is a dose for a child from one to four months old.

The amount of *alcohol* the average individual can digest and convert into force in twenty-four hours is three ounces. Its equivalent in other spirituous liquors can be calculated, whisky having 50 per cent., brandy 45 to 55 per cent., red and white wine 10 per cent. alcoholic strength. All above this quantity is injurious, and is excreted unchanged.—Prof. Bartholow.

For the immediate relief of *acute laryngitis,* as in public speakers and singers, Dr. Jurist recommends a drug that will produce anæsthesia of the vocal cords, lessening their sensibility to the air. He has had good results from potassium bromidum, gr. xj, and between each act a wineglassful of wine of coca; during the day, frequent inhalations of steam from the following:—

℞—Tinct. benzoin. comp., . . f ʒ j.
Aquæ bullient., ... f ℥ viij.—M.

To reduce the very high fever of *typhoid fever,* Prof. DaCosta advises the free use of whisky or brandy, and ice to the head and back of the head; sponge the patient with cold water (or, if more agreeable to patient, tepid water) three times a day. If this should not succeed, then—

℞—Antipyrin, ... gr. v.
Quininæ sulph., ... gr. j.—M.
Fiat. charta, I.

To be given every hour until the temperature is reduced, only two doses being required. The object of adding the quinine to the antipyrin is to prevent any depression.

Prof. Brinton strongly advises against dressing a *fracture of the shaft of the humerus*, as directed in many of the books, with four short humeral splints. His objection is that, if so dressed, non-union often results. The method preferred by him is the application of the internal angular splint, well padded, and assisted by three short humeral splints, the latter fastened after the internal angular splint and one at a time. A large handkerchief sling, entirely covering in hand and elbow, the hand elevated a little higher than the elbow. No primary roller to be used unless there be violent muscular action.

To dissolve the membrane of *diphtheria*, in persons with sufficient intelligence to help you, use a freshly-prepared paste of trypsin and apply with a brush; or, if unable to do this, make a solution of it, using bicarbonate of soda to help dissolve it, this solution to be used as a spray. When once made into paste or solution, trypsin rapidly deteriorates, hence always make it up fresh.

In nasal diphtheria the following, as a spray, is directed:—

℞—Sodii hyposulphitis, ... 3 iij.
Glycerini,
Aquæ, ... āā . f ʒ ij.—M.
Sig.—Spray.

—*Coll. and Clin. Rec.*

Acetate of Lead in Pneumonia,—Prof. Crocq, of Brussels, has found that a remedy which was formerly a good deal employed in pneumonia, but which has long fallen into complete disuse—viz., acetate of lead—is in many cases of great value. This remedy was prescribed, combined with opium, by Ritscher, and afterwards by Strecht, Leudet and others. Nothnagel and Rossbach mention it in their handbook, but consider that it is useless in ordinary cases, though they recommend it where there is œdema of the lung and in the hæmorrhagic form of the disease. Prof. Crocq, having prescribed the lead salt in a large number of cases, is convinced that it frequently reduces the heart beats as much as ten or fifteen per minute in a single day, and that it exerts an equally marked effect upon the temperature, the sputum, too, becoming less in quantity, and less deeply tinged. Instead of producing constipation, it is far more likely to open the bowels; but notwithstanding this action there is no objection to prescribing it with a little opium in cases where diarrhœa is present, or, if preferred, trisnitrate of bismuth may be added instead of opium. Small doses are of very little use, the minimum quantity that should be ordered for an adult per diem being six grains, and this may sometimes be increased with advantage to as much as fifteen grains. This treatment may be continued for a fortnight without any symptoms of lead-poisoning presenting themselves. Prof. Crocq remarks that it may be given at all stages of the disease, but at the beginning in strong subjects, and when the pain is severe, its action is but slight, and so antimonials are to be preferred at that time. Where, however, resolution is delayed, where there is but little fever, where the patient is very weak, where there is enteritis or diarrhœa, and especially where the digestive organs will not tolerate antimony, acetate of lead is very valuable. Again, when the pneumonia is secondary to some other serious disease, and when the heart is acting insufficiently so that the pulmonary circulation is interfered with as in Bright's disease, in organic affections of the heart, in drunkards and in old people, acetate of the lead will sometimes work wonders; indeed, he considers that it is most valuable in serious cases. Of course, it must sometimes be combined with alcohol.—*London Lancet.*

Puerperal Eclampsia.—Let me point out the position, not by any means unassailable I admit, which I think best sums up the pathology and treatment of the disease called puerperal eclampsia, or the convulsions of reproduction.

First. That it is an acute motor-neurosis arising from inflammatory action about the vaso-motor centre—the convulsions being the symptom, the inflammatory action the disease; and that the cause of this inflammation most frequently, but not invariably, also suffices to produce a renal hyperæmia.

Second. Where no albuminuria is present, the case is explained by the existence of the vaso-motor center-itis alone.

Third. That the convulsions are neither hysterical, epileptic, apoplectic nor anæmic, but entirely *sui generis*; and that *temperature* forms an important factor in their diagnosis.

Fourth. That the treatment from which the most successful results have, as yet, been obtained, and on which I would rely, is—

(Operative) *Accouchement aidé*, counter-irritation to neck and loins, and bleeding which might be had recourse to in "sthenic" cases with full pulse, but I would not abstract (122 ounces) one hundred and twenty-two ounces of blood in seventeen hours, as Lever tells us he did from "a large muscular Irish woman."

(Medicinal) Nitro-glycerine, chloral hydrate, morphia, aconite, and veratrum viride are the agents which have been shown to be the most efficacious, either as supplemental to the operative treatment above mentioned, or otherwise.

The general lesson conveyed by the series of cases which I have presented, that the mechanical albuminuria of gestation is a curable affection at little risk when properly treated; that hysteria and epilepsy stand in similar positions to those

diseases in the non-pregnant condition; but that puerperal eclampsia, or the convulsions of reproduction, is a disease, provisionally so named, of the most formidable nature and difficulty of treatment—the pathology and treatment of which cannot yet be said to stand on an altogether satisfactory and rational footing—the logical "sufficient reason" not yet being found—and will not, in my opinion, be so, until (if ever) the mysterious movements of nerve molecules and atoms be, to some wondering observer, revealed. Regarding it, however, from the nearer and coarser point of view, as an inflammation of a part of the central nervous system, we shall, I believe, become more and more able to rescue its victims from its terrible grasp.—Dr. A. D. Macdonald, in *Lond. Med. Press.*

REMOVAL OF RENAL CALCULI BY TOXIC DOSES OF BELLADONNA.—In the *Providence Med. Journal*, Dr. Murray states that, in his experience, belladonna is more beneficial than opium in relieving the pain of renal colic. In cases of renal colic, moreover, the author contends that if the drug is pushed sufficiently long, and in large enough doses, the entire removal of the calculus—first from the pelvis of the kidney to the bladder, and then from the bladder *per urethram*—often follows. Some cases are quoted illustrating this assertion. One patient had suffered for several months from repeated attacks of renal colic, during the last of which he was seen by the author, who gave belladonna until its physiological action on the eye and throat was evident, and then it was pushed further, so that in a few hours a lithic acid calculus was passed as large as an almond. In another case a youth suffered so severely from renal pain that it was decided to operate, but, before consenting, the parents consulted Dr. Murray; he ordered twenty drops of tincture of belladonna every hour, and at the end of five hours a round, rough calculus was passed. The special point to be remembered in these cases is to push the drug to its toxical stage, and keep up its action after the pain has been relieved, until a fair time has been allowed for the expulsion of the stone. You may begin with forty minims of the tincture, and repeat it every two hours, increasing or diminishing the dose according to its effect on the pain.—*Lond. Med. Rec.*

CODEINE IN OVARIAN PAIN.—Dr. Freund, of Strasburg, has recently used codeine in a large number of cases of abdominal pain from various causes, with the view of testing the assertions of Dr. Brunton, that the drug is of especial use in intestinal or pelvic pain. His results seem to indicate that Brunton's views are somewhat exaggerated. Pain from acute uterine affections, such as dysmenorrhœa, Freund found, was not as quickly relieved with codeine as with morphine, and the relief was of shorter duration. In pain from pelvic exudates and tubal disease, the drug was also of little value. In ovarian pain, however, whether from prolapse, oöphoritis, perioöphoritis, or neuralgia, the relief afforded by codeine was prompt, unmistakable, and more or less permanent even when small doses were given. The amount usually administered was about half a grain three times daily in pill form, and in but few cases was it necessary to increase this quantity. His experience coincides with Brunton's, that no disagreeable or harmful effects follow the use of the drug. It does not stupefy, diminish the appetite, nor constipate. He prescribes the pill for one month after an attack of ovarian pain, and warmly recommends the drug for the above conditions.—*Therapeutische Monatshefte.*

ENTERITIS AND ENTERO-COLITIS. — Catarrh of the stomach and catarrh of the bowels, acute and chronic, constitute the principal factors in infantile mortality during the summer months.

The successful therapeutics of enteritis includes, first, saline purgatives, preferably Rochelle salts given freely, next oleaginous purges. Whenever purges are omitted as an initial treatment in enteritis, a very bad start has been made, which will necessitate a return to it later with less positive advantages.

℞—Sulph. magnesia, ... ʒ ss.
Inf. rosarum co. U.S.P., . ʒ iv.
Tr. opii., ... ♏ viij.— M.

Ft. Sig.—Take a teaspoonful every two hours. For an infant of one or two years.

If further treatment be necessary, the following is successful in the largest number of cases:

℞—Acid nitrosi, ... ʒ ss.
Tr. opii., ... ♏ xx.
Syr. zingiberis, ... ʒ j.
Aquæ camph., ... ʒ iij.—M.

Ft Sig.—Teaspoonful every two hours.

As soon as the disease assumes the chronic form without fever, which it will not do if treated as above, nitrate of silver as follows is invariably the best treatment:

℞—Argent. nitratis, ... gr. ij.
Tr. opii camph., ... ʒ ij.
Syr. acaciæ, ... ʒ j.
Aquæ camph., ... ʒ ij.—M.
(black bottle)

Ft. Sig.—Teaspoonful every two hours.

For attacks accompanied by gastric symptoms, properly called gastro-enteritis, with the characteristic mal-odorous stools, carbolic acid with chlorate of potassium in distilled water is a wonderfully good prescription, also salol in two to five grain doses; beta-naphthol and small and fre-

quently repeated doses of calomel, or a solution of bi-chloride of mercury in very small doses, from $\frac{1}{100}$ to $\frac{1}{150}$ grain, also very dilute solution of the biniodide in solution, the latter often acts like a charm in $\frac{1}{50}$ grain dose.—*N. E. Med. Mo.*

ALBUMINURIA.—For a number of years I have been accustomed to prescribe the following mixture as a routine practice in albuminuria:

℞.—Potass. acetatis . . . . . ℥ j.
Chloroformi . . . . . ℥ss.
Acid. benzoic . . . . . ℥ss.
Aquæ . . . . . q. s. ad ℥ viij.
M.—S. f ℥ss every four hours.

This combination has proved available, but sometimes fails; and in that case I have not found it easy to find a better. Quite recently I was attending a four-year-old boy, with albuminuria which appeared without any discernible cause. At intervals the anasarca became extreme; the whole body being swollen to the utmost extent, with the concomitant discomfort and suffering. Then the swelling would gradually subside, and the child become comparatively comfortable, though the albumen never entirely disappeared. When, at the height of a new attack of anasarca, the prescription given above failed to give any tangible benefit, I then substituted the following:

℞.—Potass. acetatis . . . . . ℥ ij.
Acid. benzoic . . . . . gr. xx.
Sacch. lactis . . . . . ℥ iv.
Aquæ . . . . . q. s. ad ℥iij.
M.—S. f ℥i every two hours.

The result was that within two days the dropsy almost completely vanished, leaving the child in excellent condition, and free from all traces of albumen in his urine. This did not prove permanent; but in view of the difficulty of securing relief, the rapid and decided action of the lactose deserves attention.—*Waugh, Times and Reg.*

NEW VARIETY OF BALANITIS.—M. Cordier calls attention to a fact which has long been known that when tincture of iodine, or iodine ointment, is applied to a surface which has previously been rubbed with mercurial ointment, a severe irritation is set up; this is so severe as to produce vesication at times, and the effects will be observed even if the mercurial inunction has been made some days previously. This explains, partially, the origin of the new variety of balanitis, to which he calls attention in the *Lyon Médical*. It is observed in individuals who are taking iodide of potassium and who make applications of calomel to the glans and prepuce. A severe balanitis generally results. It is very probable that vulvitis, in women, is also often provoked by the same means, so that whenever external applications to the genitalia of men or women are about to be ordered, care should be taken to ascertain whether they are taking iodide of potassium or not. If the former is the case, calomel should be avoided as a dressing. M. Cordier claims that the circumstances alluded to above are a much more frequent cause of balanitis than is generally supposed.

LASSAR'S CURE FOR BALDNESS.—Baldness, so important a subject to every one affected, has thus far been provokingly obstinate to treatment and we accordingly recommend a trial of the plan of treatment strongly advocated by Dr. Lassar:

1. The scalp must be well lathered with a very strong tar soap for ten minutes.

2. The lather is removed, first with luke-warm, followed with colder, water in abundance; after which the scalp is thoroughly dried.

3. The scalp is then rubbed with the following solution:

℞.—Hydrarg. bichlor. corr. . . 1 part.
Glycerin . . . . . 200 parts.
Spirit. or cologne . . . . āā 300 "
M.—Sig. Ext.

4. The scalp is rubbed dry with a solution of;
℞.—Beta naphthol 0.5
Absol. alcohol 100.00
Mix.

5. After this, the scalp is thoroughly anointed with a liberal application of the following preparation:

℞.—Acidi salicylici . . . 2.00
Tr. benzoin 3.00
Neat's-foot oil . . . 100.00
Mix.

This procedure must be kept up for six to eight weeks, and be repeated every day.—*Times and Reg.*

THE INFLUENCE OF COLD IN PNEUMONIC INFECTION.—Dr. G. Lipari of Palermo in his recent experiments on the infectious nature of fibrinous pneumonia, essentially confirms what is known of Fraenkel's pneumonococcus, and has also succeeded in proving the influence of cold as a factor in the origin of fibrinous pneumonia. The endo-tracheal injection of pneumonic sputa or pleuritic exudation of animals which had died from pneumonococci gave a negative result, but when the author, before or after the endo tracheal injection, exposed the animals to cold, the result was very different. Of eight animals so treated six died with clearly established pneumonic infiltration. The author supposes that the cold paralyses the ciliated epithelium of the bronchi, and at the same time causes their mucous membrane to swell, both of which pathological processes favour the descent of the infectious material into the alveoli. These experiments were doubtless undertaken with a view to harmonise the old and

new teaching upon the origin of this prevalent disease.—*Lancet.*

Treatment of Intestinal Occlusion.—Dr. Kollman mentions in the *Münchener Medicinische Wochenschrift* a case of occlusion of the small intestine in an old woman, who, after opiates and morphia injections had been unsuccessfully given in order to arrest the violent vomiting, showed signs of such extreme weakness that operative measures were out of the question. He therefore determined to act on the lower part of the bowel by means of glycerine injections, while keeping the upper part of the intestinal tract quiet by the administration of ice and by ice-cold applications over the stomach. In this way the peristaltic action of the gut below the spot where the obstruction existed was stimulated while the part above this was kept at rest. The result was satisfactory, for on the second day a motion was passed and the patient recovered.—*Lancet.*

Herpes Zoster.—The first case was a young man with an eruption on his neck. In herpes zoster there is a change along the neurilemma of the nerves, and it is from this nerve trouble that it arises. The lesions are vesicles grouped around each other in patches along the course of one or a group of nerves; these vesicles dry up, leave a crust and a peculiar stain on the skin. Before the eruption appears there is severe pain, and to relieve this give at one dose hypodermatically:

℞.—Morphinæ sulph. . . . . gr. ¼
Atropinæ sulph. . . . . gr. 1/100.—M.

Galvanism along the course of the nerves is often efficacious. This is a case of herpes zoster cervicis. Locally he was directed to use:

℞.—Plumbi carbonatis, . . . ʒ ij.
Camphoræ, ... gr. v.
Acidi carbolici, ... gr. ij.
Ung. zinci benzoati, . . . ℥ j.

Misce, fiat unguentum, et sig.: use locally as a soothing agent.

℞.—Ferri pyrophosphatis, . . gr. xl.
Acidi arseniosi, ... gr. j.
Extracti ignatiæ, . . . gr. ij.
Extracti belladonnæ, . . gr. ij.

Misce, fiat pilula no. xx., et sig.: take one pill three times a day.

—Shoemaker, *in Times and Reg.*

Boric Acid and Alcohol for Acne.—Dr. Sarah E. Post (*Med. News*): The face is bathed at night in hot water containing a few drops of ammonia; no soap is used; it is then rinsed in cold water and dried. The solution is then applied, being sopped on with the corner of the handkerchief, or soft, clean rag. In the morning the solution is again applied without washing the face, and several times during the day if the skin becomes moist. In very bad cases apply a little ether and remove the comedones with the extractor at the time of the visit. Within a week great improvement may be obtained. The solution consists of half an ounce of boric acid in eight ounces of alcohol, to which a little perfume may be added, if desired. Unlike most applications to the skin, this forms an elegant toilet preparation.—*Weekly Med. Rev.*

Iodine in Vomiting.—Dr. Frederick Taylor, in a letter apropos of the use of iodine to check vomiting, says he has often found it of the greatest service in the vomiting of Bright's disease, in cerebral vomiting, in the vomiting of migraine and after chloroform and in gastric disease. The value of iodine in this respect was pointed out as far back as 1883, by Dr. Gaunt, of New York, and it was the perusal of this article that induced Dr. Taylor to give it a trial. There are of course, cases in which it does not succeed, but it may nevertheless prove a valuable addition to our means of treating cases of this kind. The dose is from three to five minims of the compound tincture of iodine given at intervals of fifteen minutes.—*Med. Press and Cir.*

Menorrhagia.—

℞—Fl. ext. ergot, ... ℥ ss.
Tr. catechu, ... ℥ iss.—M.

Sig.—Teaspoonful in sweetened water every one to three hours, as needful.

If undue irritability exist, causing uterine pain and febrile action:

℞—Pulv. opii, ... gr. v.
Plumbi. acet., ... gr. xx.—M.

Ft. ch. No. x. Sig.—One to be given every second to fourth hour with preceding.

After a long experience with catechu, I place more dependence upon it in these uterine flows than any other astringent.—Dr. Purviance, in *Med. Summary.*

A new expansion trocar has recently been invented by R. E. J. Durdin, L. K. Q. C. P. I. &c., which we think will serve a useful purpose in many cases. It is illustrated by a drawing in the *Lancet*, London, Eng., and described as follows: It is sharp-pointed like a trocar, with an opening near the point. The body of the instrument is hollow, and is introduced into a swelling with the blades closed. Should there be fluid or pus there, it will enter the opening near the point, run down the hollow portion of the instrument, and come out at the opening near the hinge. In this way an abcess may be tapped or any fluid removed. If an extra opening is required, the blades may be divaricated, and thus cutting and loss of blood avoided.

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The LANCET *has the largest circulation of any Medical Journal in Canada.*

MEDICAL EDUCATION IN ONTARIO.

We give below a few extracts from letters received on the subject of Medical Education. The writers give their views with all clearness. The first extract is from one of the best known and most intelligent medical men in the eastern part of Ontario: "I think the position is the right one, that all Medical Colleges in Ontario should be treated exactly alike as regards giving them financial aid of any sort or kind—whether in the way of erecting buildings for medical classes, or of supplying these buildings with such scientific apparatus as may be needed. And also that Government should be scrupulously careful not to give any color to the complaint, that any one of these more than another has an undue share of Government help or favor bestowed on it. This position will be taken by every one, except those personally interested in Toronto University Medical School. So long as the Royal College at Kingston, Trinity Medical College in Toronto, and the London Medical College are doing the very same work, and doing it just as well as the University School, it seems absurd, unjust, and altogether unjustifiable that the Government should allow any of the public funds of the Province, either openly, or in a roundabout way, to be used to aid *Medical* teaching in that Institution. Every Medical School doing the same work should be on precisely the same footing with regard to the Government. Neither the Toronto University Medical College, nor any other similar institution should receive any advantage from the Government, which is not granted to every other Medical School. After all, the 'Toronto University Medical Faculty' is only the old 'Toronto School of Medicine' under another name. Holding these views very strongly indeed, does not prevent me from expressing my very deep grief at the loss sustained by the Arts and Science Departments of the University by the late fire, and my satisfaction that the Legislature has given a good sum to help in rebuilding. But as it has been long proved by the flourishing condition of all our Ontario Medical Schools, and by the high stand their students take at examinations at home and abroad, that in Ontario, Medical Schools can abundantly well be self-supporting. I do hope the Legislature will see that not one dollar of the money it has voted is applied to medical teaching uses."

The next extract is from a medical man in central Ontario, who has evidentiy been studying the subject he writes about:—

"When I visited Toronto, at the formal opening of the Biological Department of the University, to which the most of Ontario's doctors were invited, I thought that Government was rather lavish in permitting so large an outlay of public money for a building largely under the control of the teachers of a single Medical College. As a graduate of one of the other Colleges, I know that such financial favors are not distributed, but that my institution had had to pay for its own laboratories and scientific instruments, and I was so impressed with the one-sided nature of what I saw that I mentioned the subject to more than one of my friends in Toronto, and at home on my return. I was told by some of the University men in Toronto, that the building belonged entirely to the Arts Department, and that therefore any cost incurred in its erection and furnishing was all right and proper. But appearances were all against this being true.

"When I got home I took the trouble to look over the University Medical Calendar and saw a cut of the building there. On page 17 I read this: 'The lectures and demonstrations in Biology, Physiology, Chemistry, Physics, Pathology, and Bacteriology will be given in the lecture rooms and laboratories of the new building of the Biological Department, and the School of Practical

Science.' And on page 25 I found under the names of the teachers in the Department of Biology and Physiology : 'The teaching in this Department will follow closely the requirements of the College of Physicians and Surgeons, and will, in addition, comply with the regulations of the University of Toronto.'

"When I read these it was plain to me that the new building costing many thousands of dollars of public money, was used in large measure, and was also fitted up so as to be used, for the teaching of a large number of medical subjects, and I could not help thinking it singular that all this should be done by Government for one Medical Faculty, while nothing at all was being done for any other, although all the others are just as deserving, and are turning out just as well-taught students ; and I at once wrote to the local member for my county and pointed out to him the great injustice."

We might give more extracts from other letters before us, but these show the feeling that exists throughout the country under the policy adopted, let us hope unwittingly, by the Ontario Government, in its recent action in connection with medical education. Had public laboratories been erected and furnished by the Government, and the Assembly thought them necessary, and had they been placed under the control of teachers entirely unconnected with any teaching Medical College, so that they would have been truly provincial and open to all the medical students of the Province on equal terms, no objection could have been offered ; but to erect and furnish these, and place them under the control of one of the Medical Colleges which the University had adopted as its Medical Faculty, is a flagrant wrong, not to be endured by the profession or the public of Ontario.

This sort of monopoly has been tried before, and it came to grief, and we are inclined to think as certainly as anything can be, the same result will happen again.

The Toronto correspondent of the Montreal *Witness* under date March 15th, referring to this matter, writes as follows :—"Another matter that came in for a good deal of ventilation was the relation of the University to Professional Schools. The so-called Biology Building was erected mainly for Arts purposes, but also for the purpose of enabling medical students to take advantage of the arts lectures in biology and chemistry. In view of this fact it is misleading to say that the University has not spent a dollar in promoting professional education. A less elaborate provision for teaching biology would have sufficed for the ordinary Arts Course, and some much needed improvements might then have been made in other departments. One of the two schools of medicine formerly existent in Toronto surrendered its corporate existence to become the Medical Faculty of the University, while the other continues to flourish as an independent institution. The situation is thus complicated, for anything like unfair treatment by the University of the independent school should cause an appeal to be made to the Legislature."

A SUBSTITUTE FOR PREMATURE DELIVERY.

There are few general practitioners who have not found it necessary to bring in premature labor in cases of moderately narrowed pelvis. The idea of never being able to bear a living child is one that weighs heavily upon the unhappy subject of such malformation as will prevent the proper fruition of the marriage contract. The stigma attached to such inconpetency is felt keenly by all right minded women, and the attending physician is oftentimes worried by both wife and husband to bring on premature labor, and yet try to so guage the time that a viable child may be born to them. This is a proceeding which, though often necessary, can never be undertaken without some hesitancy on the part of the attendant. Cæsarian section is as yet, notwithstanding the freedom displayed by laparotomists in exploring the abdomen, too dangerous a proceedure to tempt either parent or surgeon to permit gestation to go on to full term, knowing that a living child cannot be born by the natural outlet. We have noticed from time to time methods pursued, in the feeding of parturient women with the avowed object of rendering the bony structures of the child more yielding, so that the head would be more easily moulded and expelled. Not much attention has been paid to such measures in this country, and indeed to the ordinary medical mind the idea seems rather far fetched, and not exactly scientific.

Lately, however, some attention has been paid to this subject in Germany. T. Prochownick, of Hamburg, has been working in this line and now lays down (*Deutsch. Med. Zeit.*) a dietary for such cases. His idea is that the child should be as free as possible from adipose tissue, yet still strong and well developed. By this method he has been able to bring to a successful termination, at full term, three pregnancies, although the pelvis was in each case very narrow. The children were strong and fully matured, but of very light weight. We regret that the actual measurements of the pelvis spoken of are not given. It seems certain, however, that ordinary children could not have been born in either of the three cases

The diet which was carried out for about six weeks preceding the time of the expected confinement, was as follows: Breakfast—a small cup of coffee, with a one ounce roll: Dinner—any kind of meat, eggs, fish with but little sauce, a little "greens," cheese: Supper—about the same list as for dinner, with the addition of one and one-half to two ounces of bread, with butter as desired.

The following are forbidden: Water, soup, potatoes, starchy foods, sugar and beer. For drink the patient is allowed from ten to fourteen ounces of red or moselle wine daily. In this manner, which demands only a little strength of will on the part of the mother, the author hopes to attain mature, healthy children, possessing some stock of resistance, in cases where the induction of premature labor would be otherwise unavoidable. Besides the general lack of adipose tissue in the three children mentioned, it was found that the cranial bones were more easily compressible beneath the thin and wrinkled scalp, and on this account the progress of the labor was rendered more favorable both for mother and child. After birth the emaciated appearance of the children was rapidly dissipated by the formation of the normal layer of fat.

ADVERTISEMENTS IN MEDICAL JOURNALS.

How often do we hear of this or that Medical ›urnal, "It is mostly made up of advertise-ents." In a vast majority of cases such remarks re not only entirely uncalled for, but absolutely ›just. Does the individual who makes the remark ever notice that, let the "ads" be few or many, the number of pages of reading matter are just the same? and that he has nothing to complain of except the increased bulk of his journal, owing to the additional pages of advertising matter? There are certain things that one always thinks he can do better than any one else, mending the fire is one, bringing up children is another, and running a newspaper is another. It is a remarkable fact, however, that a man's confidence in his ability to do these things superhumanly well, usually diminishes, in direct proportion to the experience he has of them. Men who have children, and men who have had experience in conducting journals, know more and say less about how these things should be done, than bachelors and critics of other people's work in journalism are wont to do. It would be wise for some of the chronic grumblers to glance at the advertising pages of, say the London *Lancet*. Do they imagine for a moment that the vast amount of matter found there is allowed to trench upon the regular reading matter of the journal? These remarks may seem foolish to some of our readers, and yet we have heard medical men, honestly complain of the amount of such advertising matter, although the same number of pages of reading matter were therein, in their hands at the moment, as had always appeared in that journal. The patrons of a medical journal do not always consider where the means to pay the necessary running expenses are to come from. If there were no "ads" then current medical literature would cost them nearly twice as much as it does under the present system, and judging from experience, that would not be complacently borne. It may be accepted, almost as a maxim that the popularity and value of a journal may be gauged by the quality and quantity of its advertisements. No class of men are more alive to the necessity of doing business with a responsible and scientific journal, than are advertisers of medical and surgical goods. They even place the professional status of a journal, above its circulation, in deciding as to its value as an advertising medium.

SALIX NIGRA AS A SEXUAL SEDATIVE.—The fluid extract of salix nigra in doses of from half a drachm to a drachm three times a day, is said to be an efficient sexual sedative.

MEDICAL EXAMINATIONS.

WOMEN'S MEDICAL COLLEGE, TORONTO.—Miss S. P. Boyle, Toronto, first-class honors and first prize.

Miss A. Gifford, Meaford, third year prize in therapeutics.

Second Year—Miss G. R. Gray and Miss J. Gray, Toronto, second-class honors.

First Year—Miss M. E. Macdonald, Stratford; Miss E. J. Ryan, Trafalgar, first-class honors; Miss N. Rodger, Belwood, second-class honors; Miss M. A. Fleming, Toronto; Miss J. Hill, Bondhead; Miss E. G. Lennox, Toronto, third-class honors.

WESTERN UNIVERSITY LONDON.—*First Year.*—W. S. McDonald, J. J. Wilson, G. R. Pogue, P. B. Wood, H. Sanderson, with honors. J. W. Nixon, J. McIntosh, F. Guillemont, F. Hoag, B. Lees, passed.

Second Year.—H. F. McDonald, T. J. Gowan, W. H. McEwen, T. J. McBlain, R. W. Shaw, with honors. J. Parker, O. H. Patrick, J. MacGregor, G. H. Cook, R. M. Gubbins, J. Halliday, W. T. Banting, passed.

Third year—J. B. Kennedy, R. Ferguson, D. G. McNeil, T. P. McLaughlin, F. McCrimmon, with honours. M Sharp, J. W. Leininger, W. O. Murray, L. N. Arpiel, H. Wilson, passed.

Fourth year—A. N. Hayes, E. M. Copeland, A. T. Hobbs, D. K, Stenten, D. Smith, E. Macklin, G. Gibson, R. Ferguson, with honours. J. A. McEwen, F. Gust, J. H. Shoebottom, S. E. Hooper, W. Baker, passed.

The first year scholarship was won by W. S. McDonald, second year, H. F. McDonald; third year (one year's residence in the hospital), J. P. Kennedy.

Silver medal, fourth year, E. M. Copeland; gold medal, A. N. Hayes.

PHARMACEUTICAL INCOMPATIBLES.—The following useful table of incompatibles is given, (*Med. Phar.*):

Acacia—Incompatible with alcohol, alcoholic and ethereal tinctures;* borax; iron chloride; lead salts.

Acids, in General.—Incompatible with alkalies, alkaline solutions; metallic oxides.

Acid, arsenious.—Incompatible with iron oxide; magnesia; lime water.

Acid, salicylic. — Incompatible with iron compounds; potassium iodide;* lime water.

Acid, tannic.—Incompatible with alkalies, carbonates and bicarbonates; lime water; chlorine water; albumen; gelatin.

Bismuth, subnitrate.—Incompatible with calomel; sulphur; tannin; soda bicarb.

Chloral hydrate.—Incompatible with alkalies, carbonates,* ammonium and mercury compounds; potassium, bromide and alcohol.

Iodine.—Incompatible with ammonia;* alkalies, carbonates; chloral; metallic salts; starch.*

Lead, acetate.—Incompatible with acacia; acid hydrochlor.; acid sulphuric and sulphates; ammon. chloride; carbonates; lime water; iodine; potassium iodide; tannin.

Mercury, bichloride.—Incompatible with potassium iodide; * salts, carbonates; tannin.

Mercury, mild chloride (calomel). — Incompatible with acids, acid salts; alkalies, carbonates; ammon. chloride; iodine; potassium iodide; iron chloride; iodide; sulphur.

Potassium, iodide.—Incompatible with acids, acid salts; alkaloids; iron; lead and mercury salts; potassium chlorate; silver nitrate; chlorine water.

Potassium permanganate. — Incompatible with ammonia salts; alcohol; glycerin; ethereal oils; organic substances.

Sodium, bicarborate.—Incompatible with acids, acid salts; acid tannic; alkaloids; metallic salts.

Sodium, bromide. — Incompatible with acids, mineral; chlorine water; mercury compounds.

Silver, nitrate.—Incompatible with acids, acetic, hydrochloric, hydrocyanic, sulphuric, tartaric, and their salts; alkalies, carbonates; iodine; potassium iodide, bromide; sulphur; cocaine.

*Sometimes directed to be compounded.

CAUSES OF EXTRA-UTERINE PREGNANCY—Dr. Zinke in the *Am. Jour. of Obstetrics* gives the causes of extra-uterine pregnancy as follows:

1. *Terror* and *shock* coinciding with time of fecundation. 2. *Blows* upon the abdomen a short time after fruitful coition. Both of these are looked upon as doubtful, since it will never be proved whether or not they can produce a dislocation of the ovum. 3. *Malformation of the tube; paralysis* or spasm of the same; *defective or excessive length* of the tube; *engorgement, swelling* and *ulceration* of its mucous membrane; *hardening* and *retraction* of the fimbriated extremity, as well as obliteration of the tube within the uterus; all are quoted by Tarnier as observed by himself, Smellie, De Ferre, Mayor, Schmidt, Menier, and Gaide. 4. *False passages leading to Fallopian*

tube or ovary.—Tarnier cites the experiments of Gartner, of Copenhagen, who discovered a number of canals leading to the oviduct, in the hog, cow, etc., which offered passages to the spermatozoa. Dr. Blainville, who searched for these canals in women, found none. But Tarnier thinks it probable, from analogy, especially on account of the cases reported by M. Baudelocque, 1826, Dulaurens, De Graaf, and Mme. Boivin. All of these authors claim to have observed division and bifurcation of the Fallopian tube within the uterine wall, a drawing of which may be found in the American edition of Cazeaux and Tarnier, 1886. The same author refers also to M. S. Richards' anomalous case of supernumerary pavilions. 5. *Inflammatory processes* within the pelvic cavity, and *pressure* upon the tube created by swelling or morbid growths, may so obstruct the lumen of the tube as to make the passage of the ovum impossible after a certain time. 6. *Desquamative salpingitis* (Virchow and Tait) is an exceedingly ingenious as well as plausable theory, and may not be an infrequent cause of the arrest of the ovum.

TENTH INTERNATIONAL MEDICAL CONGRESS, BERLIN, 1890.—In connection with the Tenth International Medical Congress, to be held in Berlin, August 4th to 9th, 1890, there will be an International Medico-Scientific Exhibition.

The undersigned Committee of Organization has been authorized, by the representatives of the medical Faculties and leading medical Societies of the German Empire, to make the preliminary arrangements. We therefore cordially invite all who may wish to exhibit or participate in the above Exhibition. All exhibits, however, to be of a scientific nature.

The exhibits expected will be as follows:—1. New or improved Scientific Instruments for Biological and Special Medical Purposes, including apparatus for Photography and Spectral Analysis pertaining to medicine. 2. New Pharmacological Chemical Substances and Preparations. 3. New Pharmaceutical Substances and Preparations. 4. New Food Preparations. 5. New or improved Instruments for internal and external medicine, and allied specialties, including Electrotherapy. 6. Plans and Models (new) of Hospitals; Houses for reconvalescents, disinfection, and general Bathhouses. 7. New Appliances, such as pertain to nursing the sick, including the methods of transportation, and baths for the sick. 8. Apparatus (new) for Hygienic Purposes.

For applications for exhibits, and information, please address Dr. O. Lassar, Secretary-General, Bureau of the Tenth International Medical Congress, Berlin, N. W. Carlstrasse, No. 19.

Please designate all mail matter relating to the Exhibition, "Exhibition Affairs," and also enclose a visiting card or card of the firm, on which the name and residence is plainly written or printed. The Bureau is open for the present from 5 to 7 o'clock p.m.

Dr. Rudolf Virchow, President; Dr. E. von Bergmann, Dr. E. Leyden, Dr. W. Waldeyer, Vice Presidents; Dr. O. Lassar, Secretary-General.

A SEDATIVE AND EXPECTORANT MIXTURE.—J. B. Johnson, M.D., in *The Southern Clinic*, says, I have found it a fact in my experience that no class of medicines is so suitable for the treatment of the inflammatory affections of the mucous membrane of the air passages, as alkalies. They not only relieve inflammatory action of the mucous membrane, but render its secretions more liquid, and, therefore, more easily expectorated. I always rely for success in the treatment of inflammation of the air passages upon alkalies, whether the case be one of pneumonia, acute bronchitis, or influenza. I find the following prescription to suit me better than any other combination.

℞—Pulv. muriate of ammonia . . .
Iodide of potassium . . . . .
Pulv. chlorate of potassium . . aa ʒj
Tinct. digitalis . . . . . ʒij
Tinct. squill . . . . . ʒiij
Simple syrup . . . . . ℥ij
Aqua destil . . . . . ʒiv

M.S.—Shake well. Dose, a tablespoonful every two hours.

Should the cough be very troublesome and the inflammation not very great, two or three drops of the fluid extract of opium may be added to each dose. In the treatment of inflammation of the air passages, I rarely omit to apply daily ten or fifteen dry cups to the back over the lungs. This expedient I find to be of great avail in all such cases. Under proper conditions the free and rapid administration of alkalies has never disappointed me in overcoming that hyperinosis which always

presents itself in a maximum amount in pneumonia.

THE REFLEXES IN DIAGNOSIS.—If a student, or a junior practitioner who has not forgotten his physiological lore, says *The Hosp. Gaz.*, were asked what would be the effect upon the patellar reflex of severing the spinal cord high up, he would unhesitatingly reply that, according to Kirke, it would be exaggerated. In fact, the idea of the jerk which would result from tickling the sole of a man whose spinal cord had been crushed, has been firmly grafted on one's mind. Well, it seems that after all it is nothing of the kind. According to Dr. Bastian, exaggerated reflexes negative the assumption of a total transverse lesion of the cord, the effect of which he has peremptorily established to be the abolition of the deep reflexes. In this view he was ably seconded by Dr. Hughlings Jackson and Mr. Bowlby, both of whom had facts to adduce in support of the views advocated by him. This is not merely a recondite point in physiology but is possessed of a highly practical bearing in the diagnosis of, and prognosis in, cases of injury to, or disease of, the spinal cord; hitherto exaggerated reflexes have been taken to indicate total cessation of communication between the lumbar reflexes and the brain, now they will have to be interpreted to mean just the opposite. In all cases of total severance of the cord, verified by *post mortem* examination, the reflexes have been persistently abolished, and in no case of exaggerated reflexes has the lesion been demonstrated to be totally transverse. The deduction was an erroneous inference from experiments on the lower animals, in which the relationship of the higher and lower centres is not the same as in man.

COMMON SALT IN FACIAL NEURALGIA.—Mr. George Hesler (*Ed. Med. Jour.*) says that a great many cases of facial neuralgia, as also neuralgia, headache, toothache, and earache may be cured by using powdered sodium chloride as a snuff, a pinch being taken into the nostrils of the affected side, or applied by means of an insufflator. On examination of cases which Mr. Leslie reports, three of facial neuralgia, three of nervous headache, one of neuralgia following herpes, one of neuralgia accompanying glossitis, cephalgia accompanying tonsillitis, and one of bronchial asthma, it would appear that chloride of sodium possesses wonderful properties for the relief of all pains in the head. We fancy many of our readers will take this statement *cum grand salis*, but the experiment is worth trying.

EXALGINE.—Fraser (*Brit. Med. Jour.*), in the following table, gives the results obtained from exalgine, administered with a view to its analgesic effect. This, he says, is not very powerful; but the drug has the enormous advantage of freedom from the disadvantages pertaining to most other remedies of this class.

	Number of Observations.	Number Successful.	Number Unsuccessful or Doubtful.
Facial neuralgia	8	8	—
Sciatica	10	9	1
Herpetic neuralgia	10	9	1
Neuralgia of arm, in hemiplegia	11	11	—
Locomotor ataxy, 1st case	2	2	—
" " 2nd case	1	1	—
Toothache, 1st case	2	2	—
" 2nd case	2	2	—
" 3rd case	2	2	—
" 4th case	2	—	2
Cardiac angina	2	2	—
Pleuritic pain, 1st case	1	—	1
" " 2nd case	4	4	—
Rheumatic synovitis	4	4	—
Blenorrhagic rheumatism	2	1	1
Gastric pain, cancer	2	3	—
" " catarrh and cicatrized ulcer	4	2	2
Cancer in abdomen	10	6	4
Carcinoma of liver	2	—	2
Aneurysm of aorta	4	—	4
Lumbar abscess	3	—	3
	88	67	21

PARASITICIDE OINTMENT.—The following is recommended by *L'Union Med.*:

Salicylate of mercury, . 16 grains.
Vaseline, ... 1 ounce.—M.

This makes not only an excellent ointment against the parasitic skin diseases, but against eczema, pityriasis, and syphilitic vegetations.

INFANTILE MORTALITY.—In a paper on the "Causation and Restriction of Infantile Mortality," Dr. Vaughn (*Jour. Am. Med. Assoc.*) states that: 1. One-fourth of the children born in the United States die before they reach the end of the fifth year of life. 2. Derangements of digestion cause more than 50 per cent. of these deaths. This class of diseases may be restricted by proper attention to the food. 3. Infectious diseases are

serious in their effects upon infantile mortality. They may be restricted by isolating the sick and disinfecting clothing and rooms. 4. About three-eights of the total deaths from pneumonia occur among those under five years of age. Proper clothing and lessened exposure to extremes of temperature will do much to protect against this disease.

OPEN ABDOMINAL WOUNDS.—A singular plan of treating open abdominal wounds has been described by Dr. R. E. Hadra. The treatment is employed in severe septic peritonitis.

He makes an incision about twelve or fourteen inches long in the median line of the abdomen. The bowels protrude and are carefully held to one side of the wound while the clean hands of the operator are passed into the cavity and the adherent intestines loosened. The patient is then turned on his side and the bowels thoroughly flushed, sponged dry and returned. A strip of gutta-percha tissue is fastened to the skin and folded over the intestines, iodoform plugs are introduced deep in the cavity before it is closed with the gutta percha. Gauze and absorbent cotton are then applied in the usual way, a support of some kind is placed over the abdomen to keep clothes from pressing on the wound or bowels that protrude through the open wound. It is claimed that the distended bowels will gradually return to their normal calibre and then return slowly into the cavity of the peritoneum. When this is accomplished without pressure, the abdomen is closed in the usual way.

THE TIME FOR SURGICAL INTERFERENCE IN ACUTE INTESTINAL OBSTRUCTION.—In the paper on intestinal obstruction in this month's issue, Dr. Keene insists on the necessity for earlier surgical interference than has usually been practised, especially in country districts. Dr. Richardson, (*Br. Med. Jour.*), summarizes his views on this subject as follows :

1. In all cases the use of milder measures, such s purgatives, enemata and massage, may be safely arried out until the supervention of fæcal vomiting. 2. As soon as this is established an exploratory incision into the abdomen should be made ithout delay. 3. Obscurity of diagnosis in presence of this symptom ought not to stand in the way of an operation. 4. Clinical experience has taught that there is very little chance of recovery when once stercoraceous vomiting has begun, unless an operation be performed. 5. Symptoms of collapse are not a contraindication to operative interference.

NON-OPERATIVE TREATMENT OF ANAL FISTULA.—Professor Grayon lately read a paper (Paris correspondent *Jour. Am. Med. Assoc.*) before the Société de Chirurgie on the non-operative treatment of anal fistula. The author advises that fistulæ which do not give rise to distressing symptoms ought not to be operated upon. The non-operative treatment consists in rendering the stools soft and regular, and in insisting upon scrupulous cleanliness. The constitutional treatment consists in th administration of iron associated with the brom ides, and he recommends the following formula Potassii bromid, 10 grams; fer. ammon. cit., 50 centigrams ; syrup-aurant. 100 grams. One tablespoonful to be taken twice a day. After each motion one of the following suppositories should be introduced into the rectum : Iodoform, 10 centigrams ; ext. belladon., 2 centigrams; ol. theobrom., 180 centigrams.

NEW TREATMENT OF URETHRAL STRICTURE.—Dr. Gueterback, of Germany, recommends the introduction of a small bougie in cases of stricture. A filiform bougie may be used if a larger one cannot be easily introduced. The instrument should be small enough to allow the urine to escape at its sides, and should be retained in position for two days. It is claimed that at the end of two days the cicatricial tissue will be softened by means of the continued localized irritation. The treatment is not applicable to very close strictures, nor to strictures accompanied by purulent condition of the urine. The treatment is simple and easily accomplished, and may be good in selected cases.

ONTARIO MEDICAL ELECTIONS.—Of the representatives to the Ontario Medical Council the following gentlemen were elected by acclamation :— Dr. Bray, Chatham ; Dr. Ruttan, Napanee ; Dr. Orr, Maple ; Dr. Day, Trenton ; Dr. Williams, Ingersoll ; Dr. Phillip, Brantford ; Dr. Bergin, M.P., Cornwall, and Dr. Henry, Orangeville. In the other divisions, elections took ploce, resulting in the return of, Dr. Rogers, Arnprior ; Dr. A. J.

Johnston, Toronto, and Dr. Russell, Hamilton. Dr. W. Britton, Toronto, was elected to represent Toronto University, and Dr. W. B. Geikie, Trinity Medical College. The returns for the other representatives are not to hand at the time of our going to press.

WE are pleased to note that Dr. C. W. Covernton has been unanimously elected an honorary member of the Society of Medical Officers of Health, England, "as a tribute to his past services in the cause of public health." This recognition of services ably and conscientiously performed during a long period of time, will, we are sure, be gratifying, not only to the numerous personal friends of Dr. Covernton, but to all the members of the profession in Canada to whom his name is as a household word, in all that pertains to sanitation.

BRITISH DIPLOMAS, L.R.C.P., LOND.—The following Canadians were admitted Licentiates of the Royal College of Physicians, of London, Jan. 30th, J. M. Cochrane, W. A. Dixon, R. H. Palmer, and I. A. Woodruff.

TO DETECT THE MORPHIA HABIT.—It is said that the addition of a few drops of tincture of the perchloride of iron to the patient's urine will cause a characteristic blue tinge to appear if he be a morphine user.

Books and Pamphlets.

DISEASES OF WOMEN AND ABDOMINAL SURGERY. By Lawson Tait, F.R.C.S., Edin. and Eng.; Professor of Gynæcology in Queen's College, Birmingham.

The above work is in two volumes, 600 pages each, the first of which is to hand from the publishing house of Lea Bros. & Co., Philadelphia, This announcement will be hailed with pleasure by the many admirers of the author. He repeats what we prefaced to a small work on the same subject which appeared thirteen years ago, viz.: "Accurate or satisfying knowledge of the special diseases of women is so much in its infancy that any new effort to extend our acquaintance with these ailments deserves at least to be received with patience"; at the same time he sets out with the expectation of encountering free criticism. While some of his conclusions will be questioned, the general tone of the work is consistent with candour, and a disposition to acknowledge imperfection, and the readers will admire the courage of the author's honest convictions. The general plan in each subject is to set out with the anatomy and physiological functions of the organs involved, and thence by gradual steps to reach the pathological changes and their remedies. A large number of cases are cited in support of the line of practice inculcated. The illustrations are numerous and well executed; the work is attractive in style, and no physician will regret having added it to his library.

THE STUDENT'S SURGERY—A *multum in parvo*. By Frederick James Gant, F.R.C.S., senior surgeon to the Royal Free Hospital; pp. 817. Philadelphia: Lea Bros. & Co. Toronto: Vannevar & Co. 1890.

The author of this work for students, has succeeded admirably in his endeavor to present to the beginner his material in such a way that he may "acquire a sound matter-of-fact knowledge of injuries and surgical diseases, in their various forms, and of their diagnosis and treatment—including surgical operations; the knowledge of which, as divested of all theory, may be said to constitute positive surgery." The work is, of course, not as exhaustive as larger and more ambitious ones, but will prove a great boon to the student who may want to get the kernel without much husk. The author is concise and pointed in his style, and we heartily recommend the work to the student of surgery.

ESSENTIALS OF GYNECOLOGY, arranged in the form of questions and answers, for Students of Medicine. By Edwin B. Cragin, M.D., attending Gynæcologist at the Roosevelt Hospital, New York. With 58 illustrations. Philadelphia: W. B. Saunders. Toronto: Carveth & Co. 1890.

This little work will prove invaluable to the student. It will take the place of his note-book in preparing for examination, and will possess the advantage of being well-arranged and complete, which notes taken at lectures can never be. It gives all the important and latest points in condensed form. It is one of an excellent series of guides which should be in the hand of every student of medicine.

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Original Communications.

A RATIONAL METHOD OF OBTAINING EXTENSION OF THE SPINAL CORD AND COLUMN.*

BY CHARLES F. STILLMAN, M.D., CHICAGO, ILL.

The employment of traction in affections of the spine is not of recent origin, horizontal couches provided with means for stretching the spinal column having been in vogue long anterior to the use of suspension, but the comparatively recent re-introduction of the latter principle has given it a new impetus, and traction in a straight line is

Fig. 1.—Upright Spinal Extension Frame—as originally constructed.

now not only generally advised in the treatment deformative conditions and diseases of the lumn, but also for the mechanical treatment of iseased conditions of the spinal cord itself. Traction upon a curved line, however, possesses so many lvantages over this, that I am constrained to advocate it strenuously.

Several years ago, while reading a paper upon Lateral Rotary Curvature, before the Orthopœdic section of the New York Academy of Medicine,* I called attention to the employment of the curved board in connection with suspension as a curvative measure in that deformity.

At that time I presented to the notice of the section, drawings of two frames (see figs. 1 and 2), devised by me for this purpose, and, as far as known to me, the first ever constructed upon this principle.

These frames I now take pleasure in formally presenting to the profession for their acceptance, but as they differ in some minor details from those originally devised, and as their range of application has since been so greatly enlarged, I have deemed it expedient to bring their claims prominently before you through the medium of this paper.

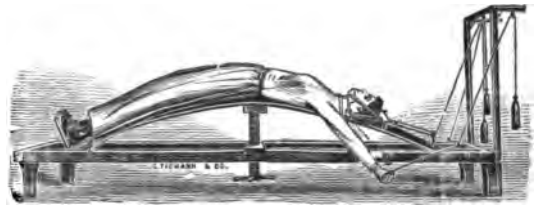

Fig. 2.—Recumbent Spinal Extension Frame—as originally constructed.

The first one to which I wish to direct your attention is standing before you. (See fig. 3.)

You will notice that it consists of a curved board, against which the patient leans, the curve being increased or diminished by means of a strong screw.

Traction is effected by means of pulleys and weights attached to a sling passing under the chin and occiput. The arms may remain free for exercises with dumb-bells, elastic cords or pulleys and weights, and slings may also pass under the axillæ as in the Sayre method.

It will readily be seen that if the posterior surface of the trunk is placed against the curved board, and traction on the spine is exerted by means of the pulleys and weights, the spine will be placed in a state of extension, the chest capacity will be increased and abdominal muscles strengthened, with a minimum of fatigue to the patient.

This frame, for the sake of convenience, I have

read before the Chicago Medical Society, Dec. 2, 1889.

* *The Medical Record*, May 21, 1887.

designated as the upright form, to distinguish it from the one to which I now take pleasure in inviting your attention. This, which I shall refer to as the *recumbent* (see fig. 4), is constructed upon

Fig. 3.—Stillman's Upright Spinal Extension Frame. (Posterior Curved Position.)

the same principle, but a longer continuance of the traction is permitted while resting upon it than while using the upright form, and it is therefore better adapted for patients of delicate physique and those in advanced stages of disease.

It should not be lost sight of, that in the use of these frames the patient is combining rest with traction in a greater degree than is possible in suspension by the Sayre method.

I shall proceed to the consideration of my subject mainly with reference to two conditions, viz.: 1st, the Influence of Traction, exerted during *posterior* curving of the spine, as a method of treatment in Pott's Disease and Lateral Rotary Curvature; and 2nd, the Influence of Traction, exerted during *anterior* curving of the spine, as a method of treatment in Locomotor Ataxia.

The use of these frames is not by any means confined to the treatment of these three conditions, but they are the only ones which will engage our attention this evening.

The changes in form of the spinal column under the influence of traction may chiefly be referred to two causes, viz.: the character of the inter-vertebral substance and ligaments connecting the vertebræ—and the shape of the vertebræ.

The inter-vertebral substance at its circumference is composed of fibro-cartilage and fibrous tissue, disposed in laminæ—these being arranged concentrically one within the other, with their edges turned toward the corresponding surfaces of the vertebræ. The plates of which these laminæ are composed are not quite vertical in their direction, those nearest the surface being curved outward, and closely approximated, protection being thus secured for the vertebræ in case an unsuspected jar or impact is received by them while the spine is curved.

The centre of each inter-vertebral disk is composed of soft, elastic, pulpy matter, and the combined effect of the circumferential and central composition of the inter-vertebral substance is to produce an elastic, tough material, which is both extensible and compressible in its nature, acting as an elastic "buffer" between the bodies of the vertebræ, while superincumbent weight is borne upon the spinal column, and allowing elongation of the vertebral column during traction.

The natural curvatures of the spine in the neck and loins are due in a great measure to the variation of the inter-vertebral disks in shape, size and thickness.*

In *shape* they accurately correspond with the surfaces of the bodies between which they are placed, being oval in the cervical and lumbar regions, and circular in the dorsal.

In *size* they are greatest in the lumbar region.

In *thickness* they vary not only in the different regions of the spine, but in different parts of the same region; thus they are uniformly thick in the lumbar region; thickest in front in the cervical

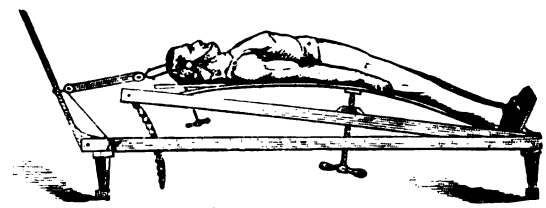

Fig. 4.—Stillman's Recumbent Spinal Extension Frame. (Posterior Curved Position.)

and lumbar regions, which are convex forward, and behind, to a slight extent, in the dorsal region.

The cervical and lumbar regions are thus necessarily given a greater freedom and pliancy of movement than the dorsal region, which has, in proportion to its length, a much smaller quantity

* The writer is indebted to "Gray's Anatomy" for the accuracy of these descriptions.

of inter-vertebral substance than the other regions, and whose concavity is chiefly due to the shape of the bones of the vertebræ and not to the shape of the inter-vertebral disks, as in the other regions.

As the inter-vertebral disks form about one-fourth of the spinal column, exclusive of the first two vertebræ, and as they are both compressible and extensible, it will readily be seen that they exercise a very important influence upon the production of extension of the spine. And here I wish to have it understood exactly what is meant by the word *extension* in this connection.

Extension is a word used to define the *condition* of a joint, or any portion of the body, produced by traction exerted in such a manner as to stretch it.

Traction is the *active cause; extension the result* —and it should not be confounded with the same word when used to express the motion of a limb as opposed to flexion. In addition to the inter-vertebral substance, the *ligamenta subflava* should also be given prominence as a factor in allowing the vertebral column to be elongated by traction. They are interposed between the laminæ of the vertebræ from the axis to the sacrum, and consist of *yellow elastic tissue*, the fibres of which are almost perpendicular in direction. In the cervical region they are thin in texture, but very broad and long; thicker in the dorsal region, and in the lumbar region are noticeably so.

These ligaments are very elastic, serving to preserve the upright posture, and to assist in resuming it after the spine has been flexed. When traction is exerted during posterior curving of the spine, the extension condition is allowed to be produced mainly by the elastic nature of the inter-vertebral disks, and this is limited chiefly by the resistance of the anterior common ligament.

In the same manner, when traction is exerted during anterior curving of the spine, the extension condition is allowed mainly by the elastic nature of the ligamenta subflava and is limited chiefly by the resistance of the supra-spinous ligament. The construction of the capsular ligaments is also such as to permit this stretching to be accomplished. They are thin and loose ligamentous sacs attached to the contiguous margins of the articulating processes of each vertebra through the greater part of their circumference, and completed internally by the ligamenta subflava. They are longer and more loose in the cervical than in the dorsal or lumbar regions, and are lined on their inner surface by synovial membrane.

Attention is called to those ligaments particularly, because in anterior curving of the spine it will be noticed that their sac-like construction does not interfere with the gliding upward of each inferior articular process of the vertebræ upon the articular process of the vertebra beneath, and does not oppose an obstacle to the stretching of the ligamenta subflava.

I shall first invite your attention to the merits of traction during posterior curving of the spine, as an essential principle of the treatment of Pott's disease. It is a well-known fact that this disease very rarely involves any other portion of a vertebra than its body in the early stages, and this clinical fact must be borne in mind in considering the mechanical treatment of this condition. Traction may also be exerted symmetrically instead of posteriorly in this disease, and it will perhaps lead to a more complete understanding of the nature of the latter if we study symmetrical traction first. By this term is meant the force which tends to convert the spine from a column into a chain, and so exerted that the main portion of the vertebræ and the posterior segments are both stretched to the same degree. This may be produced by any force which pulls the head and pelvis apart in a straight line, and the principle is utilized in several forms in the treatment of Pott's disease.

This form of traction may be produced by: 1st, the *upper extremity* (the ancients used to tie a patient head downward to a ladder in the time of Hippocrates).

2nd, *Horizontal traction*, which is the essential principle of the various flat extension beds and frames employed*; and 3rd, *by the weight of the lower extremity*, which embodies the principle of suspension now so generally employed and known as Sayre's Method.

Heather Bigg, of London, in commenting upon the latter method,† states that by it "the spine is changed from a column into a chain; from a mutual repose upon each other through their facets to a condition of mutual dependence upon their ligaments." He also asserts that "retching

*An interesting account of these can be found in the American Medical Transactions for 1880, by Dr. Benjamin Lee, of Philadelphia.

†Orthopragms of the Spine, 1882, p. 103.

and vomiting not unfrequently supervened—the patient sometimes fainted before its completion, and there are on record one or more instances in which fatal results have followed."

Prof. Shaffer, of New York, in his work on Pott's Disease, says: "When suspension is employed now-a-days to reduce the deformity of Pott's disease, it cannot, for reasons to be assigned, do more than modify the compensatory curves, unless ether be administered after the plan of the German surgeons." "If this be done, and it cannot, in my opinion, be other than dangerous or at best useless, it will be found that the pathological condition is more readily reduced, inasmuch as the reflex spasm yields when an anæsthetic is administered."

He further observes: "When extension by means of suspension is applied, as it frequently is now-a-days, to the whole vertebral column from the cervical vertebræ down, in cases of spinal disease and the curvatures resulting therefrom, how much of the apparent change that takes place in the prejection is due to the effect produced upon the projection itself."

He then says: "It is a well-known fact that our height is increased in the morning after a few hours' rest in the recumbent position. Extension made through the healthy inter-vertebral fibro-cartilage, and the other structures binding the vertebral bones together, for a few moments only, is capable of lengthening the vertebral column to a very considerable extent. But when the extension is applied to the healthy spine the normal curves are also obliterated and the spinal column becomes straight as it is in early infancy.

"When the same force is applied where a portion of the vertebral column is diseased, the compensatory curves which result from the changed center of gravity are also greatly modified, and the deformity is thus placed under far different relations to the healthy parts of the spine; and without, in my experience, affecting to any appreciable extent the true pathological curvatures."

The effects of a traction force exerted upon the spine while arched backwards against a curved board is not open to these objections, and the application of this principle to the treatment of caries of the spine will commend itself to every surgeon. It must not be confounded with the so-called backward traction of Dr. C. Fayette Taylor, which was introduced by him at a meeting of the New York State Medical Society, in 1863. In Dr. Taylor's form of backward traction the spine was merely arched backward, to shift the super-incumbent weight from the bodies of the vertebræ to the posterior processes, while no traction force was exerted upon the spine in its entirety; but in the original method which I now present for your consideration, the posterior curving of the spine is produced, and in addition to this, a traction force is exerted through the linear axis of the column while in this backward arched position. (See Fig. 4.) The effect of this combination is to produce a correct extension of the entire spinal column, tending to reduce both the compensatory and actual deformity by the combined effect of the axis traction, and the forward pressure of the curved board at the seat of disease.

It will be found of great advantage to patients in the severer stages of caries of the spine to use the recumbent frame, since in addition to the curative effect upon the disease it provides the most satisfactory form of rest yet devised for their relief, for it provides:

1. Extension of the spinal column on a posterior curve, which of itself is a source of rest to the spine by removing all superincumbent weight.

2. It tends to reduce the deformity already existing, and arrest further progress of the disease by the combination of the extension with the forward pressure of the board at the seat of disease.

3. It allows these effects to be continued indefinitely without fatigue to the patient.

In the early stages of the disease, and during convalescence, both frames may be used to advantage in conjunction with the spring lever brace (see Fig 5.), which I devised in 1883, and have since perfected, and which has since been described in various journals.

The forward pressure of the curved board upon the diseased vertebræ which have a tendency to be absorbed anteriorly and thus form a knuckle, is a powerful factor in the arrest of the disease and obliteration of the deformity when combined with traction. This is easily illustrated by taking a strip of lead or other metal and bending it in the form of a knuckle. If this strip is seized at each end and pulled, it will be found impossible to thus efface the knuckle without the expenditure of great force.

This procedure aptly illustrates the principle governing Sayre's suspension, and demonstrates why so little actual effect is produced upon the diseased portion of the spine by the method he advocates. On the other hand if the strip is arched backward and pulled, the knuckle at the same time being pressed in a forward direction with the thumbs it will be seen to disappear with the exercise of very slight force. This experiment illustrates very well the differences between Sayre's principle of suspension and the one I am advocating before you to-night, and which is exemplified in these frames.

I shall next direct your attention to the consideration of the subject of Traction combined with the curved board in the treatment of Lateral Rotary Curvature.

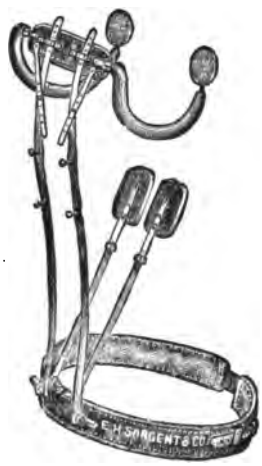

Fig. 5—V-Lever Brace for Middle Dorsal Region.

The idea of stretching the spine, as one of the curative measures in this deformity, is not a new one, Böttcher having advanced a plan in its production early in the present century, in a work on surgery published by him in Berlin.* In this work he illustrates his idea by an engraving showing an apparatus composed of a close-fitting pelvic band inferiorly and a jury mast superiorly—the two being connected by a metallic strip passing along the back of the head and spine—and provided with a ratchet for producing extension. The stretching or traction principle was next utilized in the formation of flat or horizontal extension braces, of which that of the elder Bigg, of London, forms a notable example; but traction of the spine did not come into general use until Prof. Sayre, of New York, popularized the plan by his advocacy of suspension.

When a patient is suspended, and the traction force is by this procedure exerted in a vertical direction, it will be seen that the abnormal curves become modified by the suspended weight of the lower extremities. The vertebræ being thus relieved from the pressure of their superincumbent weight, tend to rotate into their normal relations.

(*To be Continued.*)

* Berlin, 1795, Johann Böttcher.

INTERALGAMENTOUS OVARIAN CYSTOMATA.*

BY S. KEENE, M. D., BROOKLYN, N. Y.

Concluded from April No.

Treatment.— These cystomata require special treatment, owing to the fact that they are not pedunculated, but incapsulated, the capsule being formed by the broad ligaments. Not only is this the case, but as there are differences in the relations of these tumors to the ligaments, as already pointed out, there are several methods of management necessary to meet these various conditions,

I shall briefly discuss the several methods and the conditions that each is adapted to, and the technique in so far as it differs from ordinary ovariotomy. Enucleation ranks first, because it is adapted to more cases, perhaps, than any other method. This well-known method, devised and introduced by Dr. Minor, of Buffalo, has been practised by many ovarotomists. It was employed in the treatment of pedunculated cystomata when first brought out, but is now seldom practised except in the treatment of par-ovarian cysts; in fact I do not think that Dr. Minor ever employed it in the treatment of the class of cases now under consideration, but if he did he omitted a description of some of the details of the operation. Enucleation is adapted to all classes in which the cystoma descends into the pelvis completely separating one or both ligaments. In all such cases it will answer well unless there has been inflammatory action which has firmly united the cyst wall and folds of the ligaments. In such conditions the enucleation may be impossible, and other means of treatment,

to be hereinafter noted, must be adopted. Occasionally, though rarely, the cyst wall is so thin and fragile that the separation is difficult or impossible. Again, in case both ligaments are split up and the cyst lies between the uterus and the bladder, it is difficult to separate the cyst wall and the uterus, and the bleeding is often difficult to control, but in the majority of cases these are not insurmountable difficulties. In regard to the process of enucleation, I hope to be pardoned if I give some of the details with which you are familiar. They will be important in the way of making the description complete if nothing else.

In the first place, it is important to tap the cyst high up, in order to avoid wounding the thickest portion of the broad ligament. To do this it is sometimes necessary to extend the incision in the wall of the abdomen higher than may at first appear necessary. The cyst being emptied and drawn well out of the wound, the separation of the ligament and cyst wall should be begun at the point highest up, where the ligament is so thinned out as to be hardly noticeable. When the dissection is begun all round, the capsule can be lifted up and the separation continued by gently forcing a sponge between the tissues, and finally the deeper portions can be separated by the finger.

When the dissection has to be carried deep into the pelvis it is a great help to "pass one hand into the cyst as a guide, and continue the enucleation with the other" (Keith), the assistant making the necessary traction, which should be made upon the cyst wall, as the capsule is easily lacerated. If an opening is accidentally made in the capsule, it should be carefully closed with fine catgut sutures, applied upon the peritoneal side. The management of the ligamentous capsule after the cystoma is removed should first be directed to the control of hæmorrhage. In some cases a general oozing, which pressure will stop, is all that there is, but usually there are wounded vessels which need ligating. When the cyst extends deep down into the pelvis there is often very troublesome bleeding from veins. These should be ligated if possible, but this cannot be done in all cases. Pressure with a hot sponge should then be tried, and if that fails, styptics may be employed. The parts now present a pouch the inner surface of which is raw, and from which there will be some bleeding and much serous oozing. This calls for drainage and to do this the cavity should be closed, so as to cut it off from the peritoneum. The redundant tissue, which is frequently great, owing to the growth of the broad ligaments, should be treated as follows: The upper portion of the opposing sides should be folded in so as as to bring the peritoneal surfaces together and these should be united by a continuous cat-gut suture. The suturing should begin on both sides and close the parts, except at the points directly beneath the abdominal wound, where space should be left for the drainage tube. If the folds of the ligaments, thus held together by sutures, can be brought up to the lower angle of the wound, they should be fixed to the peritoneal surface of the abdominal wall by silk sutures, passed through the ligaments on each side of the opening for the drainage tube and through the wall of the abdomen. When the ligaments cannot be brought up to the wall of the abdomen, a drainage tube without side openings, should be carried down to the bottom of the cavity and fixed in the abdominal wall. The rule of practice has been to bring the whole mass of capsule into the abdominal wound and fasten it there in order to make sure of completely cutting off the sac in the ligaments from the peritoneal cavity. There are objections to this method, which more than outweigh the safety. It leaves a mass of tissue in the abdominal wound which inclines to break down and cause sepsis, and there is great liability to ventral hernia afterwards. I therefore, prefer the method described, believing it to be as safe and certainly more favorable to prompt healing and future results.

While this mode of treatment is perfectly satisfactory in suitable cases, there are difficulties attending the operation in exceptional circumstances and consequently certain dangers. The cyst wall may be easily torn and hence the danger of leaving a portion of it. When this happens it is necessary to destroy the secreting surface of that which is left. This may possibly be done by applying the cautery or pure carbolic acid, but it increases the liability to suppuration and renders the convalescence more tedious.

The next method of treatment is to remove the cyst and capsule together, by ligating the ligaments below the cyst.

This method is adapted to those cases in which the cyst is situated in one broad ligament, and

does not dip down very far into the pelvis. Such cases are described in books, as having a very broad pedicle but the most that can be correctly said of them, is that they are only partially pedunculated. In that condition the ligament can be ligated with what I may call the repeated continuous ligature, which is applied in the following way: A long ligature is passed through the ligament an inch from the outer edge and that portion tied; then one end of the ligature is passed through the portion already ligated, then carried forward and brought back through the ligament in such a way as to secure another portion and the two ends again tied, and so on, until the whole is secured. The cyst and its its capsule are then cut off. This leaves no cavity, arrests all possible hæmorrhage and in this respect is all that can be desired. But there are difficulties and dangers that may arise, even in cases where it is applicable. There is a danger of wounding the ureter, or including it in the ligature, and a knowledge of its anatomical relations is not always sufficient to guard against this accident, as it may be displaced. By drawing the cyst and ligament out of the abdominal wound it may be possible to see that the ureter is not in the way, but when this cannot be done, one must depend entirely upon the touch to localize and avoid it. This is possible, when it can be felt like a cord crossing the ligament, and by holding it in the grasp of the thumb and finger for a moment the upper side will become dilated from the accumulation of urine. This is a sure guide which I obtained from Keith. But in case the tissues are thickened by inflammatory products it is difficult, by any means to find the ureter.

There is still another way of managing these cases and that is a combination of the two methods already described. It is well adapted to the class of cases in which the cyst can be enucleated easily and the capsule is so situated that it can be ligated without injuring the ureter. The cyst is first nucleated and the capsule or so-called pedicle tied and cut off. The advantages are, that the apsule is easier to handle after the cyst is removed nd there is no danger of including any portion of ıe cyst in the ligature, an accident that may ·cur in operating by the second method alone. ıere is one fortunate feature in this method of atment, viz., in case enucleation cannot be effected, ligation alone can be resorted to. It is well then to try enucleation even if it has to be abandonded.

There still remain for consideration cystomata that cannot be removed by any of the methods known at the present time, and there are such cases. A cystoma that descends into the pelvis and has beeome firmly adherent to the ligaments by inflammatory products cannot be enucleated, neither can the capsule be ligated. At least enucleation cannot be done with any degree of safety. That complete removal of such tumors has been tried is no doubt true, but the result has been to open into the rectum or bladder, or to cause uncontrollable bleeding or peritonitis, either of which may prove fatal.

These complications are always present in suppurating intraligamentous cytomata and hence, when pus is found on tapping, it may be inferred that enucleation is impossible. I have found, also, that cellulitis has so firmly united the cyst wall to the ligamentous capsule that they could not be separated. The treatment of such cases should be by drainage alone. I am well aware that the more skilful the operator the more surely will he overcome difficulties and the more seldom will he have incomplete operations, but when the conditions which have been named are present, I am confident that it is wiser and better to empty the cystoma and unite the cyst to the abdominal wall and then drain by means of the ordinary tube.

In such cases the cyst fluid is usually septic, (this is especially so in suppurating cysts), and it is very difficult to save the peritoneum and abdominal wound from contamination. After emptying the cyst it should be thoroughly cleansed with sponges or absorbent cotton, and papillary tissue if present, may be scraped off. This should be done with the cyst drawn up in the wound. It is also well to remove as much of the cyst as possible. The best means of accomplishing these objects is a matter for discussion. Therefore I may briefly state, that I leave enough to come up and join the abdominal wall without any traction, and then treat the remaining portion in the manner described, in treating the ligaments after enucleation when drainage is employed. To do this and at the same time keep the peritoneum free from septic infection is so difficult, that I may be pardoned for giving some of the details. If the cystoma is

large I prefer to strip off the ligamentous capsule as far down as possible. If that can be done a portion of the cyst wall is then cut off, taking care to take away most on the sides, so that the central portion will come up to the abdominal wall without dragging. Bleeding vessels in the cyst wall are ligated or twisted. The detached portions of the capsule are folded into the cyst and united with a continuous suture, beginning on each side and continuing towards the centre, but leaving space enough between their meeting to admit the drainage tube. In doing this great care has to be taken to keep the hands and the instruments, which have touched the inside of the cyst, from coming in contact with the peritoneum or abdominal wound. Again, in fastening the partially closed capsule or cyst to the abdominal wall, it is necessary to pass the needle from the abdominal wall into the cyst, and not use that needle again, unless it is thoroughly cleansed. If, on the contrary, the sutures are passed from the inside of the cyst outward, septic material will surely be carried into the tissues of the abdominal wall and trouble will follow. One suture on each side of the opening in the cyst for the drainage tube will suffice to unite it to the abdominal wall, and one suture above and one below, carried through the sides of the abdominal wall and into the cyst wall, but not through, will complete the coaptation. If this much is accomplished without contaminating the normal tissues there is very little danger of septic peritonitis occuring, or septic inflammation of the abdominal walls. The drainage is so perfect that though suppuration in the remaining portion of the cyst may go on, there is not much danger of it extending outside of the sac. The drainage must be long continued and the convalesence is very slow, comparatively. In case the secreting surface of the cyst has been thoroughly destroyed by suppuration the recovery is usually not so long delayed. Contraction and closure of the cavity comes in a month or thereabout. If on the other hand a part of the secreting surface is left, the discharge may go on for months, but the patient meantime may regain her health and be able to attend to her duties comparatively. When a small pocket and sinus remain it will facilitate recovery to inject iodine or carbolic acid.

I may be prejudiced in favor of this mode of treating such cases, from the fact that I have had six, two intraligamentous cystomata and four adherent ordinary ovarian cystomata, which could not be removed, but were treated by drainage, and all of them recovered, while several cases of a similar character, treated by removal of the tumor, were lost.

Correspondence.

OUR PHILADELPHIA LETTER.

(From Our Own Correspondent.)

CLINIC BY WILLIAM OSLER.

A CASE OF AORTIC INSUFFICIENCY, INTERESTING ON ACCOUNT OF INFLUENCE OF TREATMENT.

This case, a liquor dealer, presents the following history:—He has always been healthy, with the exception of rheumatism in 1861; he confesses to a chancre and bubo, although we lose all history of specific trouble beyond the starting point in this disease. These are the only conditions in his past history which we can bring out; he has not been a hard drinker. His present condition is as following. His feet, legs and scrotum are œdematous; he is in the condition of orthopnœa, his respirations are 48 to the minute; his pulse is 96, regular, but feeble and collapsing. The cardiac apex beat is diffused in the fifth and sixth interspace, an inch outside of the nipple line, the impulse is not strong, but impresses one as being fluttering and ineffective. Dullness begins at the upper border of the fourth rib, beyond the nipple, to the left, and the sternum to the right. On auscultation we detect, at the aortic cartilage, a double second murmur. The sounds at the apex are very feeble. Watching the patient's breathing, shows that he has a Cheyne-Stokes breathing—the gradual increasing and decreasing rhythmical respiration.

This is this man's third attack of his heart trouble. The first was in '83, the second in '86, and the third in '89. In '83 he had shortness of breath on exertion; in '86 he had it while at rest in bed. Under careful treatment, over which we will go again, he was relieved each time and enabled to perform his duties with more or less satisfaction to himself. In this attack we will give him eight to ten ounces of whisky daily, with

tincture of digitalis, fifteen drops every two hours, and a third of a grain of calomel for a diuretic every four hours. In addition he will be given a saline purge, one-half ounce of Epsom salt every other morning, with as little liquid with it as possible. This latter arrangement excites very active exosmosis from the tissues; it is tapping the tissues without the necessity of cutting the skin. It was on this treatment he recovered before, sufficiently to avoid the need of a physician, and while by no means a strong man, still able to do his work or rather to oversee his business, as he tells us he did but little work directly.

In these attacks, of course, strict rest in bed was enjoined as one of the most important features. Now we are going to keep him in bed, give him ten saline purges and the whisky, but withhold the calomel and digitalis, to see if they are essential factors in changing his condition.

A week later.—The patient has improved; he rests well; can lie with his head lower; his pulse is regular and moderate, being 72. The dropsy in his legs has disappeared. We dispensed with the digitalis and calomel for the first three days after we studied him. The results were not good or satisfactory; his condition grew worse; it seemed as if rest in bed and the whisky and salts were not sufficient to help the struggling heart to regain that equilibrium which it is essential should be approximated. His symptoms grew worse, his dyspnœa became more urgent, his œdema increased and his heart impulse was more trembling and uncertain; so that four days ago we began the calomel and digitalis.

It is a disputed point as to the actual diuretic value of calomel. We know about the increase of urine when digitalis alone is given, so we can study what it was in this case. On the 6th of the month, two days before beginning calomel and digitalis, the amount of urine passed was eighteen ounces in the twenty-four hours; the same amount was passed on the 7th, and twenty on the 8th. Then these two drugs were started; on the 11th twenty-eight ounces were passed, thirty-two on the 15th, fifty-four on the 18th. There has been no especial action of the calomel in this case; in a similar one now in the house we tried this treatment, without the mercury, and found the results were as good.

Always predict a recurrence of the attack in these cases. Hoffman's anodyne and aromatic spirits of ammonia are excellent stimulants in these cases; we will try them.

[Three weeks later, the patient was discharged; equilibrium between the heart and its work being fairly well restored.]

To the Editor of the CANADA LANCET.

DEAR SIR,—At a meeting of the Ottawa Medico-Chirurgical Society held on Friday last, 11th inst., the following resolution, a copy of which I am directed to forward you, was unanimously passed.

Moved by Dr. John Sweetland, seconded by Dr. A. J. Horsey, that this society desires to express its sincere hope that Dr. Edward Playter, of this City be appointed a member of the Provincial Board of Health, not only because of his well known and acknowledged ability as a Sanitarian, but also because there is no representation on the said Board from the whole of the Eastern portion of the Province of Ontario. It is further resolved that a copy of this resolution be sent to the Honorable Charles Drury, Minister of Agriculture, Toronto, E. H. Bruesen, Esq., M.P.P., the CANADA LANCET and the *Canadian Practitioner*.

I am, yours truly,

CLARENCE J. H. CHIPMAN, M.D.

Secretary.

Reports of Societies.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, 1st April, 1890,

The President, Dr. J. W. Rosebrugh, in chair.

Dr. Cockburn reported a case of Malignant Disease of Bladder.

About the latter end of November, 1888, my father came to me complaining of a feeling of discomfort just over the pubes, not severe, which eased at times, but never quite disappeared. During the next 4 or 5 weeks it gradually and almost imperceptibly became more palpable, till one day, about Christmas 1888, a small clot of blood was washed out with the urine, which from its shape must have been lodged in the urethra. I now be-

gan to feel some anxiety, for the sequence of symptoms tallied unpleasantly closely with the earliest symptoms of malignant disease of the bladder. On January 7th, 1889, Dr. Leslie saw my father and took a favorable view as to any vesical trouble, but (if I remember aright) thought he suffered from lithiasis, an opinion afterwards confirmed by Dr. Osler. After this, my father went about as usual ; he did not complain much, but when questioned always said the pain was getting slowly worse, and small casts of blood were passed from time to time. Still feeling very dissatisfied with my father's condition, I mentioned my suspicions to Dr. Bertram, of Dundas, the family physician, and suggested he should examine per rectum, which was done. Dr. Bertram discovered nothing abnormal and at this time took a hopeful view. On March 26th my father had a sort of hysterical attack and took to his bed ; under Dr. Bertram's care he improved for a time, but he now began to pass small particles of tissue. These were carefully examined microscopically on several occasions by Drs. Malloch, Osborne and myself. Their appearance was suspicious but by no means pathognomonic. Some of these shreds of tissue were sent to Dr. Osler of Philadelphia, who very kindly examined them and (to the best of my recollection) said such particles were often passed by patients suffering from chronic degenerative changes in the kidneys.

The pain gradually increased, but no great change occurred till May 26th, when a considerable discharge of blood occurred at the end of micturition. On May 30th, Drs. Malloch and Bertram met me in consultation over my father's case. A perineal section was suggested, pending an examination of the urine. The urine showed a considerable quantity of albumen and the operation was abandoned. From this date my father commenced taking morphia hypodermically. His general condition became worse, the pain over the pubes became more severe, and the whole hypogastric region became intensely tender on pressure. The albuminuria continued to increase, but although the urine was examined for casts by Dr. Malloch and myself on several occasions, none were found.

On August 9th, 1889, Dr. Osler of Philadelphia saw my father in consultation with Dr. Malloch, Dr. Bertram and myself. (Speaking from recollection) Dr. Osler was unable to detect anything definite by firm pressure over the pubes, and digital examination per rectum gave a negative result Dr. Malloch examined my father per rectum on his first visit and both he and Dr. Osler agreed in pronouncing the prostate normal and no pathological condition to be detected. On this occasion my father was sounded by Dr. Malloch with a negative result. To the best of my recollection Dr. Osler believed it to be a case of gouty kidneys, remarking that the cause of the hæmaturia was obscure. Dr. Osler opposed any operation and disagreed with me as to the presence of malignant disease in the bladder. This opinion expressed by so eminent an authority gave myself and my family great relief, and I began to hope I might be wrong in my view of the case. From this time my father went steadily down hill, the pain became more severe and constant in the regions indicated, blood and pus were constantly being passed. The morphia was gradually increased. As time went on he began to emaciate ; blood was constantly passed at the end of micturition, and the suffering on these occasions became intense, especially towards the close of the act. The pain spread down the penis as in cases of calculus.

Uræmic symptoms appeared from time to time and the urine became loaded with albumen, but in spite of repeated examination, no casts appeared. Morphia was given in increasing doses to mitigate the constant suffering. All the symptoms became worse and worse. From time to time large quantities of blood were passed, sometimes mixed with pus. Albumen was always present in large quantities and the pain in micturition became most intense. On January 28th, 1890, I was telephoned for as there was some obstruction in the bowel. I found a hard mass blocking the rectum which was with difficulty removed. Three days later a second mass presented and was removed under chloroform. The chloroform was pushed to complete anæsthesia and I then proceeded to explore per rectum. I easily mapped out the prostate and satisfied myself that it was normal. In the situation of the bladder I was able to make out a hard irregular mass, movable, and, to a bi-manual examination, apparently about the size of the gravid uterus at the fourth or fifth week.

I now felt absolutely certain I had a case of malignant disease of the bladder to deal with From the feel of it I judged it to be most probably scirrhus cancer, involving principally the fundus.

From this time my father began rapidly to sink. The suffering became so terrible that he was kept more or less constantly under chloroform, as the morphia seemed to lose all power, an injection of 4½ grains producing no appreciable effect. He died Feb. 15th, 1890 ; the duration of the case from the earliest onset of symptoms being therefore about one year and three months. From May 30th, 1889, to February 15th, 1890, my father took over 2000 grains of morphia hypodermically, and that with only partial relief to the suffering !

Remarks.—The specimen showed a growth on the posterior wall, which it infiltrated, measuring about 1¼ inches in width, 1½ inches in depth, and one inch in thickness. Over its free surface were numerous papillæ, which formed a fringe-like covering to the growth. The tumor had not a very firm consistence, although it had been in methylated spirits for two weeks.

In the discussion which followed, Drs. Mullin, Malloch and Olmstead dissented from the view of it being scirrhus.

Dr. H. S. Griffin reported the following case of oophorectomy for chronic ovaritis:

Mrs. H., æt. 41, married, nullipara. Family history poor, several members having died of phthisis. Spare, nervous, menstruation regular.

Dec. 3, 1888.—On making an emergent night visit, I found her suffering from intense pain referred to the lower part of the back and extending into the left inguinal region. She gave a history of previous tenderness and uneasiness in the same locality extending over several weeks, but not sufficiently severe to call for treatment. A vaginal examination discovered a small-sized mass posterior to the uterus, movable but intensely tender; making steady pressure in Campbell's position, I readily succeeded in placing it above the pelvic brim. This relieved the intense pain, but considerable distress and soreness still remained. She was instructed to lie on the face and side as much as possible.

Dec. 4th to 14th.—A few hours after replacing the ovary it again prolapsed, with return of the severe pain. It was quite impossible for her to retain a pessary, but persistent attempts were made to support the ovary with cotton wool tampons, aided by rest and posture. It would, however, invariably descend within twenty-four hours and have to be replaced with the finger. Nausea and anorexia were prominent symptoms.

Dec. 14th.—Menstruation occurred, with amelioration of her condition. She was able to be up and attend to her household affairs to some slight extent.

Jan. 2nd to 12th.—The severe pain returned. All local treatment seemed only to aggravate the trouble and irritate the parts. She had to be constantly visited and the ovary replaced. Until the beginning of March this condition persisted. Then occurred an improvement and for two weeks she did not require a single visit.

Mar. 22nd.—In response to a call, I found her suffering intensely. Examination showed the ovary firmly pressed down and so intensely painful that I had to abandon attempts at reduction. Under sedatives and hot water douches I was able to replace it on the 28th. I still hoped that patient treatment would succeed in relieving her, but towards the end of April it was apparent that operative measures were necessary. She had become unable to take sufficient nourishment, and loss of rest with continuance of the pain had greatly reduced her.

April 30th.—Operated at 11 a.m. Dr. Miller gave chloroform and Dr. Leslie assisted in the operation. A two-inch incision in the usual place enabled me to hook up the left ovary from Douglas' pouch. The pedicle was tied and dropped, the right ovary examined and found normal, and the wound closed. Operation occupied about twenty minutes. On returning to the patient a few hours after, I found her suffering from the most severe retching I ever saw. It was promptly relieved, however, by a half grain hypodermic injection of morphia.

May 14th.—The patient convalesced rather slowly, owing to irritability of the stomach. The temperature, which was 100° on the day of the operation, has never reached that point since, and is now normal.

June 1st.—Patient able to leave her room and feeling quite well. Since then (nearly a year ago) she has enjoyed perfect health, and has never had a pain since the day of the operation. The ovary removed was but slightly enlarged and had three small cysts about the size of marrowfat peas.

Selected Articles.

CLINICAL REMARKS ON THE GOUTY DIATHESIS AND ABERRANT GOUT OR LITHÆMIA.

Gentlemen:—During the past three months your attention at this clinic has been largely engrossed with diseases of individual organs. We have studied cases of disorder of the stomach, liver and kidneys, affections of the heart and lungs, and of other organs, including some very interesting cases of brain lesion and neuritis, in each of which we were able to locate the morbid action in some individual part of the system.

We have had other patients in whom the disorder was a general one, such as typhoid, intermittent fever, septicæmia, or tuberculosis, where we concluded that we had to deal with an infection of the system from without by a parasitic micro-organism, and believed that we could trace the symptoms, in whole or part, to the chemical or toxic action of certain substances, incident to bacterial development, known as ptomaines or leucomaines.

To-day, I briefly ask your attention to a morbid condition of the whole system, rather than to that of a single organ or group of organs; also due to a chemical substance produced in the body, however, not by the agency of micro-organisms, but by some error of assimilation and the result of a

tendency, either inherited or acquired, which has been called the Gouty Diathesis. One of the common symptoms of this condition of the system is an increased acidity of the urine, which upon standing, frequently yields a deposit of lithates and uric acid ; it also often shows a diminution of the water. That is to say, the entire quantity of urine passed in twenty-four hours is considerably below the average quantity, and it is unduly acid. As this indicates a diminished alkalinity of the blood and an increased proportion of its acid constituents, the term "lithæmia" was introduced by Murchison to include both the condition itself and the various systems to which it gives rise. Austin Flint, Sr., proposed "uricæmia" as a substitute, but lithæmia has now become the generally accepted term to describe both the morbid state and the various digestive, nutritive and nervous phenomena associated with it. I must say, however, that the old term of the Gouty Diathesis, or if you please, Aberrant Gout, appears to me to be preferable to lithæmia, because the increase in the acid constituents of the blood is itself the result of disease, and as this has important relations to the malady universally known as gout, it would be proper in the title not to lose sight of this relationship or affinity. From this standpoint, Non-inflammatory Gout or Aberrant Gout is a better name for it than lithæmia.

The symptoms of typical gout are well known, and have not changed since they were described by Hippocrates or caricatured by Lucian ; indeed, the causes of the disease seem to have been understood quite as well by the ancients as by modern writers. Luxurious living, excess of food, the over-indulgence in pleasures of the table, which accompanies worldly prosperity, are the causes now as they were when Seneca complained that owing to the prevailing luxurous habits even the women had become gouty, and Pliny, deploring the degeneracy of his times, pointed to the greater tendency to gout among the decendants than among grandparents, and says that it must have been imported on account of its foreign name (podagra). At the present day, we have the assistance of biological chemistry to enable us to trace the relation from cause to effect, and we can see the direct connection between the excess of nitrogen in the food, its faulty assimilation by the digestive organs and defective excretion, and the occurrence of every form of gout or lithæmia. This error of assimilation or of excretion may be handed down from one generation to another, the physiological sins of the parents being visited upon the chiidren, just as Brown-Séquard's guinea pigs were born three-toed because their mother had been mutilated. As has been said :—

"The fathers have eaten a sour grape, and the children's teeth are set on edge."

I have not time to dwell upon the hygienic value of the modern methods of canning fruits and vegetables, by which we have an abundant supply of vegetable food all the year round, but I may call your attention to the fact that the Saxon ancestors of the English people (as described for instance by Scott, in "Invanhoe,") during a large part of the year, lived principally upon meat and pastry, and drank large quantities of malt liquor, a diet very favorable to the development of gout, as many of their decendants can testify.

As Garrod has pointed out, the initial lesion in a gouty attack is the deposit of crystals of urate of sodium in the synovial membrane of a joint, which subsequently cause irritation and excite inflammation. This initial lesion need not be accompanied by inflammation, for we have in the pinna of the ear, or in the eyelids, similar deposits of urates without inflammation, forming the so-called chalky concretions, which are so common a sign of the gouty diathesis that we always look for them in this situation. In many cases the examination of the helix of the ear will throw light upon some obscure symptom of aberrant gout which otherwise might not be correctly interpreted. These spots upon the eyelids or ears, or around the joints of the fingers or toes, are so characteristic of gout that I believe the Latin name "gutta" refers to them. In the dictionaries and text-books generally, gout is said to come from the Latin "gutta, a drop," referring to a drop of morbid humor instilled into the joint, and implying a humoral pathology. But gutta also signifies a "fleck," or a spot upon a stone or other substance," and this is just what we see in the localities just mentioned. The French "Goutte" has the same etymology and definition ; the German "Gitch" probably comes from the verb "gitchen," to torture, on account of the suffering connected with it. The classical name of the disease, "podagra," has reference to the pain in the foot, which is most frequently the site of the attack ; other compound words have been devised by older writers to indicate the gouty invasion of other joints, by prefixing to "agra," the word belonging to the part affected, as gonagra, chier-agra, etc., which is an unnecessary and absurd refinement of nomenclature—a distinction which is no longer considered worth perpetuating.

With this rather lengthy introduction, I will now take up the notes of the case, and make them as brief as possible. The patient, 32 years of age, a laboring man, complains of symptoms of indigestion, sour stomach and heartburn, bowels rather constipated; but his principal disability arises from muscular pains in different parts of his body, mostly about his shoulders and his legs. He thinks that his feet swell at times. He has no fever. His pulse is about a hundred, and there is a systolic murmur heard all over the cardiac area, but not propagated to the vessels of the neck, therefore due to mitral lesion—mitral regurgitation, in

fact. The heart is not materially enlarged and is performing its function well; there is moderate hypertrophy, which is compensatory. The liver is slightly enlarged. His urine, passed in normal quantity, or rather less, is decidedly acid in reaction, but contains no albumen. Under the microscope are to be seen urates and the common forms of uric acid. I can detect no œdema of the feet, and he has not the physiognomy of chronic Bright's disease, Although he has not the appearance of being very ill, he declares that he has not been able to do any work for nearly a year.

In reviewing the case, we find evidences of gastric disorder, heart lesion and excessive acidity of the urine, with muscular pain and stiffness. I do not pay much regard to his statement that his feet sometimes swell, because the heart is performing its duty well, and the kidneys do not appear to be affected; and moreover, this sense of swelling of the extremities is not an uncommon symptom in some forms of indigestion, as pointed out first by Leared.

He says he has been a moderate user of alcohol, but principally in the form of malt liquor. Let me say here that alcohol, especially in the form of fermented or brewed liquors, is a sort of a physiologcal test of gout, and where the diathesis exists, indulgence in this form of stimulant is apt to be quickly followed by very disagreeable consequences, either as a typical inflammation in ball, of the great toe, or possibly non-inflammatory pain or disability elsewhere. I can find a slght chalk-like nodule in the pinna of his ear, which places the case in its proper light. He is too ignorant to give us any information of value concerning the health or the habits of his parents or grandparents, and possibly he did not inherit the disease at all, but acquired it himself by eating meat largely and indulgence in malt liquor. The heart-lesion is probably due to gouty changes in the leaflets of the mitral valve, causing deformity and insufficiency.

It would be a mistake in this case to regard it simply as one of dyspepsia and dismiss him with a prescription of soda and gentian. Gastric catarrh in this case, as in many others, is simply a symptom of the gouty diathesis, just as the pains in the muscles are. These muscle-pains may be due to actual deposit of urate of soda in their structure, causing irritation and interfering with motion—just as in the case of the pork butcher at a previous cl ıic, whose pains were attributed to the presence o trichina, undergoing calcareous changes in the n scles—or the pain may be due to lessened a alinity of the blood, caused by the acid condition o the stomach, in which case relief will be ex- p ienced at once, after correction of the diet and tl administration of alkalies. This relief, how- e r, will be only temporary, unless remedies are d cted against the underlying gouty diathesis, or the actual lithmæia, which is largely due, according to Murchison, to defective hepatic activity. J. Milner Fothergill, recently deceased, ably defended the view that there was actually an increased production of uric acid in the economy, owing to degeneration and tissue reversion. Uric acid is merely urea insufficiently elaborated or oxidized. Birds or reptiles pass solid or nearly solid urine, consisting of urates. Mammals have a fluid urine, with soluble urea in place of urates, although traces of the uric acid formation remain even in the highest mammals. When the liver is over-taxed, or is congenitally inadequate, it tends to revert to its primitive uric acid formation, and this is Fothergill's explantation of the gouty diathesis, and a very plausible one. Whether the uric acid is produced in greatly increased amount, however, or is simply retained, owing to deficient excretion, there can be no doubt but that Garrod's statement is correct: that it is present in large excess in the blood, both in the typical gouty attack and at the aberrant or lithæmic form.

With regard to the question of treatment we will not now speak of the acute form, further than to make the observation that the more acute the attack, whether typical or atypical, the more likelihood of there being benefit from the administration of colchicum. In cases of lithæmic pains in the internal organs, I have administered a pill of something like this: Merck's colchicine gr. $\frac{1}{74}$, quinine hydrochlorate gr. iij, and morphine hydrochlorate gr. $\frac{1}{4}$, every four or six hours, with marked benefit. I have also used colchicine (gr. $\frac{1}{100}$) hypodermically in gouty sciatica, with entire relief after a few injections.

Alkalies, as you might infer from what has been stated above, are also highly serviceable. But as soda forms the urate of soda, which is insoluble, we generally give potash, preferable in combination with a vegetable acid, as the citrate or the benzoate, or simply as the carbonate. Where there has been swelling around the joints, the iodide of potassium has been used with much benefit. As lithia forms the most soluble salt of all with uric acid, it is frequently given; the prinpal objection to its use being that of greater cost. In the present case we will give the iodide of potasssum (gr. iij), ammonium hydrochlorate (gr. xij), ext. rhei fld. ℥lv, aq. menthæ pip. q. s. ad f℥ss, in a cupful of hot water before meals. In some cases I have resorted to the very soluble iodide of lithium (gr. ij-iij,, with decided benefit. The natural mineral waters containing lithia are largely used for this class of cases, but in most of them the proportion is infinitesimal. Vichy and Carlsbad waters have long been employed in the gouty diathesis, but, as the former contains mainly carbonate of sodium, the latter is preferable. Although this water contains sulphate of sodium and chloride of sodium in decided proportion, the

taste is neither disagreeable nor brimy. Carlsbad has had a reputation extending over a century for its great success with gouty subjects, who resort there for treatment from all parts of the world, this country not excepted. Fortunately for those who cannot undertake a journey to the Springs, the mountain comes to Mahomet, for the water is now bottled under government supervision, exported to this country, and can be taken at the patient's home with equal benefit. Indeed Sir Henry Thompson considers the home treament preferable, as it involves less disturbance and can be continued for much longer time. It is of interest in this connection to note that Prosser James, a short time since, made the important discovery that the water, of the Carlsbad Springs contains lithia in combination with the salts already named, thus giving an additional explanation of its acknowledged usefulness in lithæmia and aberrant gout,

As uric acid is a lower form of oxidation than urea, it is eminently desirable to introduce more oxygen into the system in treating gouty subjects, and this can best be done by the classical method of systematic exercise in the open air. Where there is an evident deficiency of red-blood cells to act as oxygen carries to the tissues, it is proper to give iron and Fowlers's solution of arsenic, and this is sometimes of great advantage where the patient is neuralgic as well as gouty. It has been proposed to administer oxygen by the digestive tract as in the Bergeon method of treating phthisis but the rectal form of administation will hardly meet with favor either with physician or patient in this country. It is possible, however, that an oxygenated water, which has been used in Paris hospitals by Dujardin-Beaumetz and others, might yield good results and it is worthy of further trial, as by this means an increased amount of oxygen has been found to enter the blood. If to these we add due regulation of the diet, limiting the amount of nitrogenized food, and especially the amount of alcohol, keeping the emunctories in good working order, we will do much toward overcoming the gouty diathesis and preventing lithæmia and its various concomitants.—Frank Woodbury, A. M., M. D. in *Coll. and Clin. Rec.*

FACIAL PARALYSIS. PERIPHERAL EPILEPSY.

FACIAL PARALYSIS.

Gentlemen,—Observe the difference between the eyes of this patient, one of which is shut closely, the other partly open. This indicates weakness of the orbicular muscle of the eye, which is innervated by the seventh nerve, so that there is disease in the seventh, or facial nerve, which is distributed to the side of the face.

As he smiles one side of his face is drawn up, while the other is motionless, and it is impossible for him to pucker up his lips—a movement which is effected by the action of the orbicularis oris muscle. As he cannot close the eyelids on account of lack of contractile power in the orbicularis palpebrarum, so in the mouth he cannot adjust the lips because the right half of the orbicularis oris is paralyzed. He is able, you notice, to blow out his cheeks. He says that in eating the food gets between the teeth and gums.

The patient informs us that in June last he fell from a second-story window some twenty feet upon a stone slab, breaking his wrist. Blood came from his ears, which indicates that rupture of the tympanic membrane had occurred. Whatever hæmorrhage took place must have been due to rupture of the blood vessels in the middle ear.

This history leads us to infer that the injury was to the nerve where it lies in the bony canal, and that, perhaps, there was fracture of the bone with consequent compression of the nerve trunk. If this were the case we should expect the chorda tympani to be involved.

His sense of taste is unimpaired on the left side, but on the right it is diminished. If in a case of this kind the sense of taste is preserved, we infer that the injury is outside of the point where the chorda tympani springs from the main trunk, and that the lesion is a peripheral one, involving one portion of the nerve, and leaving the other intact. Where the sense of taste is involved, the lesion is nearer the brain than the origin of the chorda tympani nerve.

This patient perceives the taste of an acid applied to the right side of the tongue, so that the paralysis is not complete. There are some who believe that the glosso-pharyngeal nerve is the only nerve of taste, but this varies in different persons.

The structures of the inner ear are not destroyed. The probability is that the tympanum was ruptured, which was followed by thickening, so that the drum-head is no longer capable of taking up sound vibrations and communicating them from the ossicles of the ear to the internal structures.

What is the proper treatment for such a case? It is not an uncommon thing to find patients suffering with paralysis of the facial nerve consequent upon simple exposure to damp or cold, but such patients are predisposed to rheumatism and demand specific treatment. But it would be useless to treat this patient with salicylate of sodium, or with other remedies given for the purpose of curing rheumatism. You must recognize the fact that there is injury to the nerve within the bony canal through which the nerve passes from the base of the brain, and endeavor to remove the exudation that probably causes compression. It is possible that we may not succeed in doing this, for there may have been

sufficient displacement of the walls of the bony canal to produce permanent compression analogous to what occurs in the spinal cord where there is caries of the vertebræ. You know how patients suffer from caries of the vertebræ. After a time the vertebræ collapse, an angular curvature of the spine is produced, and the cord is compressed at the point of curvature. The pressure is sufficient to cut off all functional power in the cord, and the lower part of the body is consequently permanently paralyzed. We have a similar condition of things in the case before us, and it is possible that we may never succeed in relieving the nerve from the pressure.

Mercury and the iodide of potassium are efficient for this purpose, and in this case I would advise doses of five grains of the iodide of potassium, and one thirtieth of a grain of the bichloride of mercury. Let the patient make use of these remedies as long as symptoms of deafness or paralysis exist. Electricity should also be applied to the face. The faradic current should be used, not because it will cure the disease, but because it will keep the muscles of the face exercised. What we desire is to preserve the muscles from atrophy while we are endeavoring to relieve the nerve from pressure. This is the only line of treatment that can be used with any prospect of success in such a case.

EPILEPSY OF PERIPHERAL ORIGIN.

The next patient I present to you is a girl ten years of age. About a year ago, while apparently perfectly well, she was seized with convulsions. The first attack came on about nine o'clock in the morning, the mother finding her lying on the floor. She bit her tongue, frothed at the mouth, and, her mother says, remained unconscious for half an hour or more. After recovering from the fit the patient continued in a more or less feverish condition the remainder of the day. This was doubtless a typical epileptic convulsion. The next day she had two convulsions, one immediately following the other.

It is important to ascertain, if possible, whether she had fever, or whether the pulse grew more rapid during the attacks and remained so, because we must make a distinction between convulsions that are epileptic in their character, recurring one after another, and constituting what is technically known as the *status epilepticus*, in which there is a rise of temperature, and those cases where we have simply a succession of eclamptic fits unattended by any febrile movement. The former is much more dangerous to the patient.

The mother did not bring the child here wholly on account of the epileptic convulsions, and we learn that there are other interesting points in connection with the case furnished us by her physician.

The child, you remember, is ten years of age, and you observe that she presents a maturity beyond her years. The mother informs us that in her family the occurrence of puberty is earlier than in the majority of families. Usually menstruation does not develop before the twelfth or fifteenth year, but from the appearance and development of this girl, I should say the commencement of menstruation was not far distant. Again, her physician has made a vaginal examination, and has discovered an ulcerated condition of the cervix uteri. This seems almost incredible in a child of her age, but is, of course, possible, and does sometimes occur.

We do not know positively the cause of these convulsions, but the probability is that they are due to the ulcerated cervix. It must not be forgotten that in some of these cases we have hysterical epileptiform paroxysms, or there may be a combination of the two disorders in a delicate and exceedingly nervous organization, producing all the convulsive manifestations common to *hystero-epilepsy*. But in epilepsy we have certain marked symptoms which enable us to discriminate between it and true hysteria. *True* hysteria is very rarely accompanied by unconsciousness. In a complete hysterical convulsion the patient preserves a certain amount of consciousness; in fact, she knows under what circumstances the convulsion is to take place, and, therefore, guards herself against a fall when the fit comes on. Again, the tongue and lips are not bitten. There are some physicians, however, who claim that this latter may occur, but I should want strong confirmatory evidence to make me believe that a patient bites her tongue and becomes entirely unconscious in a true hysterical convulsion. Hysteria manifests itself in the day-time, during the hours when the nervous system is exposed to excitation; in other words, it belongs to the waking period. The convulsions do not occur during sleep. This patient has convulsions in the night and while aslsep, which is characteristic of true epilepsy.

Whatever may be said as to the general condition of her nervous system, its excitability, perhaps its hyterical predisposition, I think we have in this case an element of true epilepsy governing and controlling the manifestations. If that be the case, where is the source of irritation that excites the convulsions? This is not a case of congenital epilepsy, for, according to the statements of the mother, it is only a year ago since the convulsions first manifested themselves. Having, as we are told, an ulcerated condition of the cervix uteri, the probability is that *there* was the starting-point of the irritations which were communicated to the brain centres and brought about the convulsive movements. We may call this a case of *peripheral epilepsy*.

The treatment should, of course, be directed principally to the peripheral organ, and the ulcer-

ated condition of the cervix must be remedied before we can hope to relieve the convulsions. It is highly probable that the occurrence of menstruation and the periodical relief that is obtained through that function will help to relieve the patient of the seizures. She must be cured of all swelling, inflammation, and ulceration about the cervix. In addition, the ordinary treatment of central nervous diseases must be resorted to, which I have detailed in previous lectures.—Henry M. Lyman, M.D., in *Med. News.*

A NEW METHOD FOR EXTRACTION OF THE BREECH.

Mars (Krakau), describes a new method, by which he has succeeded in three cases in extracting the presenting breech, when he had failed by the ordinary manual methods. In his first case the breech presented, S. L. A., os fully dilated, breech arrested at superior strait; beginning acute œdema of the lungs in the mother. Failing to extract by means of the fingers hooked into the groins and by other manual methods, he adopted the following procedure: Supporting the fundus with the left hand, he introduced his right hand flatwise within the uterus between the uterine wall and the child's sacrum, until the hand was high enough to enable him to grasp the fœtus with the thumb and little finger just above the iliac crests, while the other fingers were extended along the fœtal spine. He then drew upon the fœtal trunk during the pains, which pressed his hand firmly against the child's body, until the breech was brought to the pelvic floor, when the fœtus was easily extracted.

THE DELIVERY OF THE AFTER-COMING HEAD.

At the annual meeting of the German Society for Gynæcology in Halle, in May, 1888, Winckel (Munich) described the various methods which have been given for extracting the after-coming head, numbering in all twenty-one, from Hippocrates to the present time. The method which Winckel especially recommended was the one originated by Wigand and introduced by A. Martin; briefly described, the method is as follows:—After the birth of the body it is supported on the left arm and thus raised up; one finger of the left hand is introduced into the mouth and the lower jaw thereby drawn down to the neck, but no farther, that is, no further traction is exerted on the jaw. The right hand then grasps the uterus and exerts pressure on the head in the direction of the forehead.

The advantages of this method are—

(1) That injuries to the child through traction on the chin and shoulders are avoided.

(2) That pressure from without excites contractions of the uterus.

(3) That an assistant is not necessary.

It is believed that an assistant cannot exert pressure in the right direction as well as the operator himself, who can best judge of the results of pressure when made by his own hand. Winckel insists that traction must be made with the finger in the mouth, but that the chin should be simply guided, while the chief force is exerted by external pressure on the head; he has treated a series of difficult cases by this method, and has often been surprised at the ease with which delivery was accomplished.

In the discussion of Winckel's communication, Breisky (Vienna) and J. Veit (Berlin) both expressed a fear that in thus exerting forcible suprapubic pressure while the head was in the lower uterine segment there would be great risk of rupturing or otherwise injuring the uterus.

Eisenhart, assistant in Winckel's clinic, wrote an instructive paper later on the comparative merits of the Mauriceau (otherwise known as the Smellie-Veit) and the Wigand-Martin or Winckel methods of delivering the after-coming head. He based his studies on a series of fifty cases, from which were excluded macerated fœtuses and those which were not at least 18.6 inches long; and he examined these cases with reference to maternal injuries incurred through delivery and to the ultimate results in regard to the fœtal life and injuries. Eisenhart's conclusions are as follows:—The prospect of delivering a living child, and one which will remain alive, is at least seven times greater by *expression* of the after-coming head by Winckel's method than by *extraction* of the same the Smellie-Veit method. Occasional fatal injuries and a great number of less severe injuries of the child are wholly excluded by the skilful practice of Winckel's method. The mother is exposed to no danger by the proper application of this method; the puerperium runs a normal course for the most part, and is less often accompanied by unpleasant complications than when delivery has been performed by the Smellie-Veit method.—Dr. Charles M. Green in *Brit. Med. and Surg. Jour.*

SULPHONAL, CHLORALAMID, EXALGINE.

SULPHONAL.

Field (*Therap. Gaz.*), after experimenting with the remedy in 200 cases, believes it stands first in the list of the hypnotics. The failures to obtain success will be few, if certain rules are observed. It is considered essential to bear in mind the following:

1. Time of administration. 2. Method of administration. 3. The dose. Sulphonal requires from one to two hours before its action becomes manifested. It should not be given when the

digestive process is in full activity. *The dose should be taken one or two hours before retiring.* The patient should not prepare for sleeping until a feeling of drowsiness is experienced. The drug should always be given in *finely divided powder.* Mechanical irritation from the coarse grains may produce enuresis. These grains are less soluble in the stomach. Tablets of the compressed drug should not be used. Five grains in powder produced the same effect as fifteen grains in the tablet form. It should not be given in milk or water, as its imperfect solubility will cause some of the crystals to adhere to the sides of the glass, preventing the patient from receiving the full dose. It may be used in wafer or merely placed upon the tongue. Rectal administration produced same results.

After continued use of the drug the author finds that the dose may be decreased. The patient who has used it night after night will require his large doses at first; later on a small dose will answer. If a dose of fifteen grains be first given, after a time five grains will be found to produce sleep. The drug, from these observations, was rarely at fault in producing sleep, but it was noticed that if the dose were too large, or if the sleep were interrupted, a feeling of langour, drowsiness and physical weakness was experienced next day. A small dose will produce sleep, and its effect will be spent upon waking. The sleep is refreshing and never depresses. The nerves and circulatory systems are not objectionably affected.

Age and idiosyncrasy may sometimes cause the non-action of the drug. In children gastric disturbance always prevents its action. Semile organic change causes non-action; also profound mental disturbance. If, after the repeated administration of doses, varying from ten to twenty grains, observing the rules above given, the drug does not produce sleep, some idiosyncrasy must be suspected. The author believes that the drug is curative, and mentions a case where it was used for months, producing sleep during the course of the treatment. Upon omitting the drug, normal sleep followed without interruption. Sulphonal should never be given in more than ten grain doses, as a rule. Fifteen grains are sometimes used. Twenty grains is the maximum dose, and should not be exceeded. It is a perfect hypnotic, because, although the means is artificial, the result is physiological.

CHLORALAMID.

(*Therap. Gaz.*) Chloralamid is a combination chloral and formamide. It comes in colorless ystals, having a bitter taste, being soluble in ten rts cold water and in one part alcohol. It is ore freely soluble in warm water under 140° F. cess of temperature causes separation of the redients.

It may be given in wine, water, or capsule.

The dose is from twenty to forty grains.

It produces sleep in twenty-five to thirty minutes. The sleep lasts from six to eight hours.

The indications for its use are:

Nervous excitement.

Neurasthenia.

Insomnia in heart or lung disease.

It does not act where the insomonia is accompanied by severe pain or mental disturbance.

EXALGINE.

(*Therap. Gaz.*) From various papers on exalgine the following conclusions as to its action may be given:

1. The dose is from two to five grains every three or four hours.
2. It reduces neuralgic and muscular pains.
3. It is not poisonous and produces no depression.
4. It is non-irritant.
5. It tends to reduce and prevent convulsive movements.

PHENACETINE IN PERTUSSIS.

Heinman (*Jour. d'Med.* July, 1889) writes of the value of the above remedy in producing a calming effect upon the nervous system, and its action in restraining spasmodic action, nervous or muscular. In pertussis it had no action whatever on the duration of the disease, but seemed perceptibly to lessen the frequency of the paroxysms of coughing. This was conclusively proved in several cases in which, upon omitting giving the medicine, the child immediately had a return of violent fits of coughing, which were again held in check by exhibiting phenacetine.

Six grains may be given to a child three years of age in divided doses.—Bartley in *Med. Jour.*

HOW SOME TRY TO PASS THE NAVAL MEDICAL BOARD.

Medical Director Delevan Bloodgood, United States Navy, in responding to the toast of the Medical Corps of the Navy at the banquet of the Medical Society of the State of New York, among many other good things said: "A wrong impression has gotten abroad that great and increasing gaps exist in our ranks. There are a moderate number of vacancies in the grade of assistant surgeon, but more than enough available candidates for the places are booked and awaiting examination. Now I desire to explain a bit concerning our required examination, and the bruit that it is too 'exacting.' The origin of the complaint cannot better be demonstrated than by some quotations from the records of the Examining Board. Bear in mind, gentlemen, please, that all these candidates, whose essays I will cite, hold

the degree of Doctor of Medicine, and many of them the baccalaureate also, and several were practitioners of from one to three years' standing. Thus one writes in making his application: 'I am a graduate of the Medical College of——, and I think I can fill the bill. Is there any vacancies now? Is the examination as rigid as reported? I am a lover of surgery and hope I will fill the bill.' One aspirant was asked in the oral examination, 'Who was Hannibal?' 'Hannibal was a Hun and a Vandal,' he replied; next, 'How did Hannibal get into Spain?' and answered: He must have crossed around through Asia.' Question to another: 'Who succeeded Julius Cæsar?' 'Pontius Pilate,' was his prompt reply. Another answered that 'the Suez Canal connects the Atlantic and Pacific Oceans at Panama.' One stated that 'Galen, who was born in the eighteenth century, discovered the circulation of the blood;' another mentioned that 'Harvey was a celebrated electrician.' One doctor had never heard of Jenner, but another knew all about him, and said that Jenner lived before Christ and practised vaccination in India, where he was born. One, when directed to write a prescription in Latin, said, 'We don't write Latin prescriptions out in——County.' Another sent his note from his writing-table to the president of the Board: 'Sir, you ask me in your question, "What is the mediastinum?" As I never heard of it I would like to have your advice about withdrawing from the examination.' Another wrote in answer that 'phimosis is a disease coming on in old age.' One, who had been in practice for two years in a large city, closed his remarkably original treatise on diarrhœa thus: 'But the best treatment of all to be given is them old opium pills found in shops and other places about town.' And here is another doctor's exhaustive thesis on opium: 'Opium is grown extensively, that is the tree from which the gum opium is obtained, in the West Indies. The tree grows a small papula, which is of a gummy consistence; this is then gathered and the inside of the papula is then formed upon cakes or lumps, in which way it is transported to market. It is also grown in some of those foreign countries like China, which produces a very superior article. I find that opium is not borne as well by the stomic as codei. This active salt, which is very soluble in aqua, gives us a form of giving the effects of narcotism in very minute doses.' These candidates, and very many others like them, and but only they, denounce our examinations as too exacting; and this is the way that one of them, not unlike the worm, turned and addressed the president of the Board: 'Sir, in your conversation with me you made a simile, the fore part of which I have forgotten because I was so forcibly struck with the latter part, which was that something was like a man having won a girl's love he then cared nothing for it. Owing to your at the time superior position I said nothing. As I said nothing you may have thought that I agreed with you. The difference in our position was removed by your rejecting me as a candidate. I now say that I do not agree with the sentiment. On the contrary, I believe that if there is one thing more than another which relieves life of its barrenness and renders it worth living it is the love of a true woman, and the longer a man has won that love, and the more he has fathomed its depth, the more he will value it, if he be a man. And further allow me to say that in my opinion the most despicable individual on the face of God's earth is he who under the guise of a pleasing exterior seeks to win a pure girl's love, simply that he may have the diabolical pleasure of trampling upon it. I could not leave you under the impression that I had such an opinion of my fellow-men in general, as agreement with you would signify. Should even twenty years' service in the Navy force upon me such an opinion, I thank you for rejecting me; contact with my fellow-men in private life will, I am sure, show me a better side of human nature than that. I have had my say. Yours, M. D.'"—*Med. Rec.*

WHAT IS CONGESTION OF THE LUNGS?

There is no expression among the many used by the members of our profession that has for so many years occupied a position of usefulness as the word congestion. To the laity it represents a comfortable kind of disease which can be handled with safety by the attendant, and from which recovery is more than probable. When we read in the newspapers that a certain public person is confined to his house by a mild attack of congestion of the lungs, we often wonder what the real condition of the lungs is. Is it pneumonia, or a passing bronchitis, or the result of cardiac or renal changes? We often hear the question, "Is it congestion or inflammation of the lungs?" And with a sigh of relief sometimes the patient's wife receives the intimation that the man who is lying in the next room with a stitch in his side, rapid breathing, and a temperature of 103°F., is only suffering from congestion so far, not inflammation. And there are cases where a medical man speaks of having so treated a case to prevent congestion going on to inflammation.

In a recent number of the *Lancet*, Dr. Wilks, of Guy's Hospital, publicly asks the question, What is congestion of the lungs? And he goes on to say: If by congestion of the lungs is meant pneumonia, then let a spade be called a spade, and in the name of pathology, of honesty, and of common sense let the term congestion be discarded. He thinks that the upper classes have their lungs

congested, while those who occupy a lower place in the social world have the same disease diagnosticated as inflammation, or pneumonia. But this is not strictly true. It all arises from the fact that with our hospital patients we are not subject to much questioning, and consequently are not obliged to give a diagnosis to suit the popular standard of comprehension or to disguise a dangerous disease under an innocently sounding stage name.

The use of all these pet names for disease is dishonest. By relieving the fears of a timid family, by calling pneumonia congestion of the lungs, and scarlet fever scarlatina, we are guilty of falsehood, and we expose our patient to risk by not representing fully and honestly the danger to which his life is exposed. The public should be made to understand that scarlatina is scarlet fever and that a "diptheric sore throat" is diphtheria. Some timid mothers will be frightened, it is true, but perhaps some children's lives will be saved.

We are sorry to say that perhaps their is another *raison d'être* for these vague and unmeaning expressions. As charity covers the multitude of sins, so the use of vague terms covers up a multitude of vague diagnoses. The practitioner who does not know whether his throat case is one of follicular inflammation of the tonsils or diphtheria, places himself in a secure position on the fence of doubt by calling it one of diptheritic sore throat, and can bring himself with ease and comfort to a safe diagnosis according to the subsequent course of the disease.—*Ed. N.Y. Med. Jour.*

THE SURGICAL TREATMENT OF HEPATIC ABCESS.

Mr. Rickman J. Godlee summarizes as follows the essential part of his views on the treatment of hepatic abcess, recently published in some extremely valuable lectures which embrace the whole subject, and embody the latest and most authorative opinions as to its surgical aspect:

1. Pyæmic abcesses do not call for surgical interference, or, if in rare cases one should point, it is only opened to relieve symptoms, but without hope of doing permanent good.

2. The same observations apply to abcesses resulting from suppurative phlebitis of the portal vein.

3. Multiple abcesses associated with dysentery or ulceration of the bowels are very unfavorable for surgical treatment. They must, however, be opened and treated on the same lines as the single or tropical abcesses, because they cannot be certainly diagnosed.

4. Single abcess of the liver, whether tropical or not, must, if it approach the surface, be opened, the following precautions being adopted:

(*a*) If it present at the epigastrium, the p ence of adhesions must be ascertained before incising the liver.

(*b*) If through the chest-wall, a spot must be chosen below the normal limit of the pleura; but if by chance either pleura or peritoneum be opened, the opening must be closed with a double row of stitches before incising the liver.

(*c*) Strict antiseptic precautions must be throughout adopted, either carbolic acid or some slightly soluble salt of mercury being employed for the dressing.

(*d*) The tube must be of large size at first, and a tube of some sort must be kept in until the discharge is reduced to a very minute quantity.

If the abcess have burst in the lung, pleura, pericardium, peritoneum, or kidney, and the position of the abcess can be clearly determined, it must be opened without delay. If the position of an abcess be only suspected and the patient be losing ground, it is right to puncture the liver in the most likely situation, bearing in mind that, although usually quite harmless, a slight amount of risk accompanies this very trivial operation.

This rule applies to cases in which the abcess has ruptured into any of the cavities enumerated above. If, on the other hand, whether the abcess has ruptured or not, there are no means of diagnosing the whereabouts of the matter, and the patient is not losing or is even gaining ground, the surgeon should hold his hand for a time.

5. Hydatids of the upper and back part of the liver are to be treated upon the same lines; but in cases of this sort, and in those of subdiaphragmatic abcess, it must be remembered that the diaphram may be pushed up to a very great height, thus closely simulating intrapleural suppuration.

6. Empymea, pericarditis, and peritonitis caused by rupture of an hepatic abcess or hydatid must be promptly dealt with on general principles.

A Curious Hypnotic Test.—Dr. J. M. Charcot, writes in the January *Forum*:—"The end I have ever held before my eyes, then, and which I hope I have never lost from view, is this: to study the hypnotic phenomena according to a strictly scientific method, and for this purpose to employ processes, purely physical, and which can always be compared with one another, so that the results obtained by me may be rigorously tested by all observers who shall use the same processes under the same conditions.

"Take one example from among a thousand. I present to a woman patient in the hypnotic state a blank leaf of paper and say to her: 'Here is my portrait; what do you think of it? Is it a good likeness?' After a few moments hesitation, she answers: 'yes, indeed, your photograph; will you give it to me?' To impress deeply in

the mind of the subject this imaginary portrait, I point with my finger toward one of the four sides of the square leaf of paper, and tell her that my profile looks in that direction; I describe my clothing. The image being now fixed in her mind I take that leaf of paper and mix it with a score of other leaves precisely like it. I then hand the whole pack to the patient, bidding her go over them and let me know whether she finds among these anything she has seen before. She begins to look at the leaves one after another, and as soon as her eyes falls upon the one first shown to her (I had made upon it a mark that she could not discern), forthwith she exclaims: 'Look, your portrait!' What is more curious still, if I turn the leaf upside down, as soon as her eyes rest upon it she turns it over, saying that my photograph is on the obverse. I then convey to her the order that she shall continue to see the portrait on the blank paper even after the hypnosis has passed. Then I awaken her and again hand to her the pack of papers, requesting her to look over them. She handles them just as before when she was hypnotized, and utters the same exclamation: 'Look, your portrait!' If now I tell her she may retire she returns to her dormitory, and her first care will be to show to her companions the photograph I have given her. Of course her companions, not having received the suggestion, will see only a blank leaf of paper without any trace whatever of a portrait, and will laugh at our subject and treat her as a visionary. Furthermore, this suggestion, this hallucination, will, if I wish, continue several days; all I have to do is to express the wish to the patient before awakening her.

"The foregoing experiments have been made hundreds of times by me and by others, and the fact can easily be substantiated; their objectivity is as complete as could be wished in researches of this kind. Hypnotism is directly amenable to our means of investigation, and must needs be an integral part of the known domain of science. To that goal our efforts ought to be directed."—*Bost. Med. and Surg Jour.*

CHEYNE-STOKES BREATHING.—The remarkable respiratory phenomenon, for the recognition and description of which medical science is indebted to the two great Dublin physicians, Dr. Cheyne and Dr. Stokes, has always excited much interest and no little speculation. It may be remembered that Stokes ascribed it to fatty degeneration of the heart, considered it of fatal prognostic significance, and pointed out that although Dr. Cheyne's patient died of apoplexy, yet he had also the above cardiac condition. Traube did much to dispel the idea of its entire dependence on cardiac changes, showing clearly, as has frequently been shown since, that it was quite as much a symptom of cerebral disease alone. Of all the theories as to its mechanism the most rational appears to be that of Filehne, who advanced the question a stage beyond where Traube had left it. For the last-named distinguished authority was content to refer it to variations in the arterial blood-supply of the medulla, whilst Filehne contended that the phenomenon could be best explained by assuming a difference in the relative excitability of the vaso-motor centre on the one hand, and the respiratory centre on the other. If from any cause a condition of arterial spasm were induced by asphyxia, so as to produce anæmia of the medulla, this anæmia, and not the primary asphyxia, would succeed in exciting the dormant respiratory centre to violent and excessive action. The respirations thus initiated would proceed with increasing depth and frequency, until the blood surcharged with oxygen would temporarily relieve the vascular spasm, and, at the same time, annul the excitability of the respiratory centre, so that a period of apnœa would result, lasting until the asphyxial state once more excited its action on the centres concerned. If this doctrine be accepted, it will serve to harmonize the many conditions—circulatory, nervous, and toxic—under which Cheyne-Stokes breathing is known to occur. Of equal interest is the practical importance of the phenomenon—viz., its prognostic significance—which Dr. Stokes thought so serious. The question was raised by Dr. Stephen Mackenzie at a recent meeting of the Clinical Society, and has elicited some interesting experiences contributed to our columns, from which it would appear that cases have been known to recover, although they must form but a small minority. It should also be borne in mind that in meningitis and other cerebral affections the breathing may be irregular, even with apnœal periods; but, as Biot showed, such do not conform to the classical type of Cheyne-Stokes breathing, of which the regular rhythm is so marked a feature.—*Lancet.*

CHRONIC INDOLENT ULCERS.—The subject that I wish to bring to notice for your consideration is the treatment of chronic indolent ulcers. Realizing that with many physicians these ulcers are hard to *cure*, I venture to present to you a treatment that has in my hands proved very successful.

I will not take up your time with a technical description of these ulcers, for you have all seen them. They are characterized by slowness of progress and are generally found in persons with a debilitated constitution. The limb is usually swollen, and the circulation in the œdematous tissues is feeble; the surface of the sore is smooth and glassy, more or less irregular, and generally presents a few weak ill-conditioned granulations, the edges are raised, often undermined, and the limb emits a very disagreeable odor, especially in

hot weather. Oftentimes the healing process remains stationary, or without any apparent reason sloughing occurs and ulceration spreads rapidly.

These ulcers are generally the result of injury and debilitating influences, such as exposure, drink, disease, lack of cleanliness, etc. In my opinion a great many physicians fail in the cure of these ulcers by using applications that are too irritating, and by not enjoining cleanliness and attention to the details of the treatment.

The treatment that I have employed with much success in these cases is as follows: I commence by the administration of an alterative tonic mixture, which I consider of much importance in the cure of these cases, such as the following:

℞—Potass. iodidi, ... ʒ iij.
Liq. potass. arsenit., . . . ʒ j.
Syr. sarsaparillæ co., . . . ℥ iv.
Aquæ, ... q. s ad. ℥ viij.—M.

Sig.—One teaspoonful before meals.

For external treatment I use:

℞—Iodoformi, ... ʒ j.
Ung. petrolii, ... ℥ j.—M.

Sig.—Use in a thin layer every night.

For a bandage I apply light weight woollen flannel, and much prefer it in one strip and of good length. I employ two bandages and render them *antiseptic* before using, and while one is in use, I have the other washed, dried, ironed and disinfected before the second application. The best means of doing this is to order a mixture, such as the following:

℞—Hydrarg. chlor. corros., . . ʒ ij.
Alcohol, ... ℥ ij.—M.

A teaspoonful of this mixture to a quart of water makes a 1.2000 solution, in which the bandages are to be disinfected. I use tar soap to cleanse the parts, dress the sore every night, and occasionally stimulate the surfaces with a pencil of nitrate of silver. I apply the bandage in the manner recommended by the text books commencing just back of the toes and bandaging quite tightly up to and above the ulcer. This is the treatment I have employed in these cases with remarkable success. I claim nothing particularly original or new for it, but if any of you have an old ulcer that is giving you some trouble, you will be both pleased and surprised by following this method of treatment.—Dr. Emerson, in *International Jour. of Surg.*

Drainage of the Peritoneum.—Dr. Delbert discusses this subject at great length in the *Annales de Gynecologie* for February. He compares drainage by means of large tubes with capillary drainage, effected by iodoform gauze or some similar agent. As the result of clinical and anatomical experience, he concludes that capillary drainage alone can ensure the escape of liquids secreted during the first hours after operation. All forms of drain, tubes or gauze alike, become rapidly surrounded by adhesions, and thus, as in the case of *tamponnement*, they may cause a dangerous focus of infection to become practically extraperitoneal. To that result he believes the efficacy of drainage to be principally due. The capillary drainage of Mikulicz is affected by packing Douglas' pouch with iodoform gauze. That authority specially recommends his method in cases where a large cavity is left, at the lower part of the abdominal wound, not to be closed by sutures. The gauze, he believes, acts as a hæmostatic plug, prevents the entry of septic germs, drains most efficaciously by capillary attraction, and, by promoting adhesions in the surrounding structures, cuts of the cavity from the rest of the peritoneum. M. Pozzi combines the two methods of drainage. He packs the cavity with the gauze, in the centre of which a drainage tube is inserted, and prevents the retention of liquid too thick to filter through the gauze. Dr. Delbet finds that by drainage with a glass tube very little fluid can be evacuated even by aspiration by means of a syringe. If a litre of water be poured into Douglas' pouch into which a glass drainage tube of the usual form is inserted, hardly a drop of the water can be removed by means of a rubber tube attached to a glass syringe and introduced into the glass drain. In fact, according to this experiment, drainage after the manner practised and advocated by so many well-known British operators is useless. Yet the system of Mikulicz is little practised in the United Kingdom, whilst results prove that glass tube drainage is admirably efficacious. However aspiration by tube and syringe may fail in experiments, it succeeds in removing ounces of fluid after operations. —*Br. Med. Jour.*

Treatment of Stricture of the Urethra by the Retention Bougie.—The author has treated several cases of urethral stricture successfully with the bougie à demeure, which should not be confounded with the catheter à demeure. This method has also been employed by Langenbeck and Hartmann. It consists in introducing a fine bougie—a filiform if necessary—which is not so large as to completely fill the lumen of the stricture, and permits the urine to escape at its sides. The instrument is allowed to remain for two days, in which time it is usually possible to pass a full-sized bougie. This plan of treatment is somewhat different from the ordinary method of urethral dilatation. In the latter, the result is due to pressure or slight superficial laceration of the stricture; in the former, to a continued localized irritation which causes a softening of the cicatricial tissue. Hence for strictures requiring imme-

diate and forcible dilatation this method is not applicable, while it is also contra-indicated in cases in which there is extensive formation of callous tissue, a purulent condition of the urine, with the presence of tight strictures. The method is indicated :—1. In cases in which the urethra is very sensitive, so that the frequent introduction of instruments is to be avoided. 2. In injuries of the anterior urethra, resulting from the use of instruments, especially if false passages are present. 3. If the introduction of instruments is difficult on account of the nature of the stricture (valve-like condition). 4. In cases where it is desired to rapidly dilate the stricture without resorting to divulsion or urethrotomy.

The instrument should be employed under strict antiseptic precautions, the urethra being previously cleansed of blood, mucus and pus. The injection of cocaine is sometimes of value.—*Deut. Zeitschr. f. Chirurgie.—Intern'l Jour. of Surg.*

THE INFLUENCE OF BROMIDE PREPARATIONS ON MENSTRUATION.—In the *Wiener Med. Blatter*, Dr. M. Ernst calls attention to a fact which has, perhaps, been already frequently observed by others, that bromide preparations, especially bromide of potassium and bromide of sodium, exert a marked retarding influence on the periods of menstruation. He reports, as illustrative of this statement, the case of a young girl, eighteen years of age, who was under treatment for epileptic convulsions, For the four previous years she had mensturated regularly, and, according to the mother, the first epileptic attacks occurred when she was six years of age, and since puberty the intervals between the convulsive seizures had been rapidly decreasing. For the last few months the patient had been taking thirty, and then later forty-five, grains of bromide of sodium daily, with the result that the attacks appeared at much longer intervals, and were much milder in character. At the same time it was noticed that the menstrual periods, instead of occurring perfectly regularly as before, now occurred only every five or six weeks, and sometimes eight weeks elapsed before the reappearance of a period A second similar case is also referred to, likewise that of an epileptic woman, in whom again the menstrual periods were retarded in their appearance under the influence of the bromides. These cases seem to prove that the interference with menstruation was not attributable to the epilepsy itself, but seem to show that it was directly due to the action of the bromides. Further observations are desirable to determine whether this result is accidental, or whether it may be expected to follow prolonged use of the bromides.—*Therap. Gaz.*

THE TREATMENT OF ACUTE CATARRH OF THE RECTUM.—Quite frequently the practitioner of medicine sees cases in which the entire list of remedies generally found of value in the treatment of diarrhœa have proved useless, or merely palliative in effect. While they may control the frequent movements of the bowels for a time, the trouble reasserts itself, as soon as the medicine is withdrawn, at the best in a somewhat modified form. Careful inquiry will show, in such cases, several points of value as to diagnosis and treatment. The attack has probably been preceded by a few days during which there has been a sensation of weight or fulness in the rectum and about the anus ; following this, a sensation of bearing down asserts itself, accompanied by violent pain referred to the region of the stomach, or small gut. So severe is the pain in its paroxysms that the patient may cry out with it, and the perspiration break out over the body. At first small passages may occur, but after a few stools they consist of wind and a few drops of mucus, which is expelled after a period of agonizing pain and tenesmus. Opium makes the state ultimately far worse than before, and nearly all astringents are valueless. Under these circumstances, small doses of chlorate of potash injected into the rectum are most serviceable, only one or two injections being necessary in some acute cases to produce a cure. A saturated solution of the potash in water should be employed, and about half a tumblerful injected each time, very slowly and without force, and retained for ten or fifteen minutes. Large injections will cause pain and expulsion of the liquid, and no result will be attained.—*Med. News.*

EFFERVESCENT SALTS.— Effervescent Bromo Soda. (W. R. Warner & Co.) This is a combination of Caffeine gr. i. and Bromide Sodium grs. xxx. After its use personally for several years, and prescribing it in a large number of cases, I must be pardoned if I speak enthusiastic of it in nervous headache. This difficulty being so often met with a prompt, pleasant and effectual remedy is a boon indeed. This the physician has in Bromo Soda. A nervous headache, resulting from over-work, study, worry, debility, etc., from one to three doses of Bromo Soda will in a very short time put new life and vigor in the sufferer.

From personal experience I can speak of this agent in the most positive terms. And that is, its almost magic effects after it has been necessary to use an opiate for some time, until that peculiar disagreeable sensation, so often felt in the brain, is produced. A dose of Bromo Soda drives this sensation from the brain almost as rapidly as the sun will a "fog" from dark places. The sensation to the patient reminds him of a mist disappearing at the approach of sun light. The head is left as "clear as a bell" in a few minutes.

A teaspoonful in half a glass of sweetened water, drank at once, is a very grateful, sparkling drink.

Granular Effervescent Citrate of Magnesia is another preparation of superior worth. Far superior to the usual liquid form.

"Crab Orchard Salt," an exact analysis of the Crab Orchard Spring, producing the effect of that valuable agent.

Messrs. W. R. Warner & Co. have presented to the profession a long list of "Effervescent Salts," many of them of superior value as therapeutic preparations.—Dr. C. W. Peckerill in *Medical Free Press.*

THE STUDY OF PRACTICAL ANATOMY.—During the first few months devoted to practical dissection the student practically only learns to handle his scalpel, and wastes a large quantity of very useful material. An American anatomist suggests that the difficulty of providing a proper supply of "subjects" common to this country and the States, would be minimised by the simple and satisfactory device of using the bodies of dogs and cats for such purposes. The beginner has to learn the appearance of muscle, fascia, artery and nerve, and the position of the larger viscera. This could be done as well on the body of the dog or cat as on the human cadaver, and at vastly less expense. The same observation would apply to classes in operative surgery where students are taught to make incisions and apply ligatures and sutures. Indeed, trephining, resection of bone, tenotomy, &c., could be practised just as well on the bodies of animals as on man. If the system led to the acquisition by the student of ideas of comparative anatomy, this would not constitute an insuperable objection. Even if the human body is in certain respects to be preferred, the impossibility of obtaining a supply commensurate with the demand, and the fact that instruction in practical surgery as at present conducted in reality amounts to nothing at all, should suffice to commend the proposal to our teachers.—*Hospital Gazette.*

IODINE IN VOMITING.—M. Darthier records in *L'Union Medicale* his testimony as to the value of the iuternal administration of tincture of iodine for the relief of vomiting—a method which has been employed for years both in America and England. He has observed its use in nineteen cases, eleven of which were tuberculous subjects, and has formed the opinion that it is of more value in the vomiting of early phthisis than in the later stages of that disease. He relates instances of advanced cases with obstinate vomiting, where the symptom was largely controlled by the drug. One case was that of a female with bronchial dilitation (subsequently fatal from acute tuberculosis), who for three weeks had regularly vomited after each meal. Following the commencement of the drug she ceased to vomit; and the symptom was completely cured after a week's treatment. The drug also proved useful in cases of alcoholic gastritis in gastric ulcer, and in the vomiting of pregnancy and of chlorosis. M. Darthier recommends the French tincture of iodine to be administered in ten-drop doses, diluted with two wineglassfuls of water, to be taken in three portions immediately after meals.—*The Lancet.*

THE EFFECT OF ALCOHOL ON THE FUNCTION OF THE STOMACH IN HEALTHY PEOPLE.—Dr. Blumenau, in a preliminary communication to the Russian medical journal *Vrach*, publishes certain conclusions he draws from his experiments on the effect of alcohol on the function of the stomach in healthy people. The author says that in the beginning of the digestive process the functional activity of the gastric juice, the general acidity, as well as the amount of hydrochloric acid and the corresponding digestive power of the juice, are diminished; and in people who are not used to alcohol this decrease is even more distinct. The stronger the solution of alcohol, the greater is its effect. During the first three hours or a little less after its consumption the digestion is slower, but after that it becomes much quicker, to compensate, as it were, for the previous loss of time. The quantity of acid in general, and of that of hydrochloric acid in particular, rises from 1½ to 2 per cent. above the normal, and the gastric juice has consequently a greater digestive power in the later hours. The secretion of the gastric juice also lasts longer and is more ample when alcohol is consumed. The activity of the pepsine remains about the same, although the coagulation of milk seems to be somewhat slower at the beginning. The motor power of the stomach and its capacity for absorption are diminished in direct proportion to the strength of the alcoholic solution.—*Lancet.*

CLEANING THE TEETH.—Dentists are daily committing the error of not instructing their patients in regard to the proper methods of cleansing their mouths—brushing, picking, rinsing with warm water after meals and at night before going to bed. Our observations must show that people who do those things faithfully, have little or no dentistry to do. It is astonishing what ignorance exists among people of all classes and conditions, as to what cleanliness of the mouth means. They will tell you frankly that they do not brush their mouths as well as they ought to, for they did not know they were going to be examined, and when you looked, *you really thought so*, and the second thought was, *probably not for a month.* Cleanly habits are part of an individual's education and can be formed only in childhood. Too much care cannot be bestowed on the subject for the little ones. Not much dentifrice of any kind is needed —small quill tooth-picks are best, narrow strips of rubber dam for spaces the quill will not clean.

Water used frequently for rinsing, with a motion of the tongue on all the surfaces of the teeth and gums, lingual, palatal, libial and buccal. So much for preventive dentistry, which should be our highest aim.—*Exchange.*

J. E. PRICHARD, M.D., Baltimore, Md., says: The Aletris Cordial I think a most excellent remedy, and have used it in ten cases of suppressed menstruation, in all of which with the best results. Among my patients were four unmarried women, one aged 20 years, had her menstruation arrested six months, when she came under my care. She was swollen and suffered considerable pain at each monthly period, but she had no show of any catamenial discharge. I placed her on Aletris Cordial, teaspoonful doses, three times a day. She continued it for seven days, when she menstruated. I ordered her to commence again five days before her expected time to menstruate, which she has done. She is now regular and suffers no pain. Have also used it in cases of vaginal leucorrhœa with a happy result. In cases of hysteria which we sometimes find complicated with leucorrhœa, I I have combined it with Celerina:

℞—Aletris Cordial, ... ℥ iv.
Celerina, ... ℥ iv.—M.

Sig.—Teaspoonful every three hours for one day, then the next would give it four to five hours.

I am happy to say that it has not failed to give relief in all cases in which I have prescribed it.

MARITAL SELECTION.—The Japanese seem to use their reasoning powers in the selection of a partner in a way that we outer barbarians might envy. The physical antecedents of a girl are thoroughly scrutinised, and candidates with any diathetic or hereditary taint are infallibly blackballed. Would that a little of this caution could be introduced into our own "courting" customs instead of leaving this important matter to be decided by passion, proverbially blind, or interest, not less proverbially indiscriminating, from a health point of view. The physiologist, who discourses so eloquently on the inexorable laws of heredity, is often no better advised in his choice than the burly costermonger who, at an early period of his career, takes the first opportunity of gratifying his sexual appetite without let or hindrance. Protests on such a matter may, however, be likened to a voice howling in a wilderness—of unphysiological sentiment.—*Hospital Gazette.*

THE TREATMENT OF CROUPOUS PNEUMONIA WITH CALOMEL.—Dr. Enrico Pieragnoli, in *Le Sperimentale*, pleads for the more general use of calomel in croupous pneumonia. His method consists in the use of calomel combined with opium, and in the discarding of expectorants during the first few days of the disease. The results were very satisfactory; five adult patients not treated with calomel all died (the treatment which they received is not stated); of fifteen cases in which calomel was employed but one died. The results in children were equally good. The course of the pneumonia treated by calomel was milder, and the solification was not so firm and had less tendency to spread. Even the diarrhœa which resulted seemed to exercise a favorable influence upon the course of the disease.—*Cent. f. d. ges. Ther.*—*Weekly Med. Rev.*

BLOODLESS TREATMENT OF FISTULÆ.—In the Moscow therapeutic weekly *Novosti Terapii*, Dr. Göorgy I. Tarabrin, of Ekaterinovka, warmly recommends the treatment of incomplete fistulæ (sinuses) by the intrafistulous injection of a two per cent. solution of carbolic acid or a solution of corrosive sublimate (from three to ten grains to six ounces of distilled water), repeated two or three times a day. The injection should be preceded by probing (in order to determine the direction which the jet should take). It is advisable to commence the treatment with a weak solution and then to gradually pass to stronger ones. The treatment is said to prove successful in a couple of weeks even in old cases of deep fistulæ penetrating into the bone.—*Med. and Surg. Rep.*

ONE of those singular malformations described as "parasitic fœtus" has been attracting some attention at Demerara. A coolie was admitted into the Colonial Hospital suffering from a tumor in the right loin. The man died, and at the post-mortem examination the "tumor" proved to be possessed of a cranium, with hair attached, an imperfect nose and mouth, no hand or feet, but the rudiments of male genitals. The subject of this "autosite" was thirty-two years of age.—*Lancet.*

THE MICROBE OF ERYSIPELAS.—Professor Leroy has published in *Comptes Rendus de la Soc. de Biologie*, 6th December, 1889, some interesting observations on the cultivation of the *streptococcus erysipelatis*, from which it appears that this fungus, after growing and developing in gelatine, may disappear and remain inert for a time (over a year in these experiments), may resuscitate itself, again grow actively, and become capable of inoculating fresh gelatine cultivations, and exciting true erysipelatous inflammation in the ear of the rabbit. Professor Leroy thinks that this property accounts for recurrent and periodic erysipelas.

ITCHING OF ANUS AND GENITALS IN WOMEN.—

℞—Linseed oil (raw), ... ℥ iv.
Kennedy's Ext. Pinus Can., . ℥ ij.—M.

Sig.—Apply two or three times a day.

THE CANADA LANCET.

A Monthly Journal of Medical and Surgical Science Criticism and News.

☞ *Communications solicited on all Medical and Scientific subjects, and also Reports of Cases occurring in practice. Address,* DR. J. L. DAVISON, 12 Charles St., Toronto.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER, 23 Rue Richer, Paris.

TORONTO, MAY, 1890.

The LANCET *has the largest circulation of any Medical Journal in Canada.*

TRINITY MUSICAL DEGREES IN ENGLAND.

The dense ignorance in regard to Colonial matters and Institutions which prevails in England, even in circles composed of otherwise well educated people, is astounding. The recent excitement in certain quarters there in regard to the holding of Examinations in Music in England, by Trinity University, and granting degrees to those who come up to the high standard required, presents a striking illustration of this.

Newspaper articles and correspondents have been vapouring away as though these degrees were conferred at random and for money, irrespective altogether of musical attainments and without having any curriculum laid down, or even thought of.

Nothing can be further from the truth, and long before this is in print, the very papers that have been misled in this matter will no doubt have ascertained their mistake, and they will not be slow in duly acknowledging it.

The curriculum in the Faculty of Music in Trinity University is very high, and includes three annual examinations for the Degrees of Mus. Bac., is practically identical with the musical requirements of the English universities, and was drawn up independently for Canadian undergraduates in 1883.

Indeed, the extension of the examinations to England was the result of the action of the English Musical Press, unknown to, and unsought by Trinity University.

The Examining Board is composed of some of the best musical authorities in the world, and with regard to the standard, it is sufficient to say that in the last three years fifty-two per cent. of the candidates for the final Mus. Bac. examinations alone, have been rejected by the Examiners.

Some of the English Medical Journals have gone so far as to hint that "Medical Degrees" would probably be obtainable in England from "Trinity University" on "favorable terms." This is sheer impertinence, the outcome of gross ignorance of the very high ground taken, not by Trinity University only, but, we are proud to say, by all our Canadian Universities, in regard to Degrees in every department.

No British medical man can obtain the medical degree of Trinity University who does not comply with every requirement laid down in the calendar. He must be duly qualified and registered in Great Britan for five years, and must, in order to get a "Trinity" degree, come to Canada, and undergo at the same time and place as our own students a complete examination in all the final subjects. Just as our Canadian graduates are required to undergo in Britain, examinations in the final branches before they can get a British qualification, so the same examinations are exacted here from all British practitioners who desire to obtain a medical degree in Canada, either from Trinity, or from any other Canadian University.

The *Hospital Gazette*, in speaking of this matter is apparently actuated by mere friendly feelings towards our Colonial institutions, though not, we believe, thoroughly informed as to the requirements of Trinity University in the granting of medical degrees. In a recent issue it says:—The fact that the authorities of the University of Trinity College, Toronto, have decided to grant their "M.D." degree under certain conditions as to examination to duly qualified English practitioners of medicine, has caused no little consternation among the heads of English Universities, and strong pressure is being put on the Government to use their powers in order to stop this infringement of their privileges. For many years the Brussels "M.D." degree has been conferred —for a consideration—upon English doctors with-

out exciting any opposition, and it appears strange that such an outcry should be made now that one of our colonial universities announces its intention to do the same thing.

ONTARIO MEDICAL ASSOCIATION.

The arrangements for the annual meeting on the 11th and 12th of June are nearly completed, and the invitations and railway passes will be sent out early in May. The meetings are to be held this year in the College of Physicians and Surgeons, Bay street, instead of the Education Department, a change which it is hoped will be to the advantage of the visiting members of the Association.

Dr. J. A. Temple, of Toronto, will preside, and will deliver the annual address. Among the "Members by Invitation" who are expected to be present are Dr. Andrew Smith, of New York, who will read a paper on "Empyæma, with the mechanical results of opening the thorax," which he will illustrate by apparatus, Dr. Wm. Goodell, of Philadelphia, who will read a paper entitled "What I have learned to unlearn in the Diseases of Women," and Drs. Emmet and Bull, of New York.

The discussions have been arranged for as follows:—

Medicine.—Dr. Aylesworth, of Collingwood, reads a paper entitled, "A plea for a more liberal or scientific spirit of investigation on the part of the Regular or Rational School of Medicine." Discussed by Dr. A. A. Macdonald, Toronto, and Dr. W. A. Ross, Barrie.

Surgery.—Dr. Sullivan, Kingston, followed by Dr. Grasett, Toronto, and Dr. Waugh, London, will discuss "Hernia."

Obstetrics.—Dr. A. T. Carson, Toronto, will read a paper on "The Prevention of Post Partum Hæmmorrhage," which will be discussed by Dr. Powell, of Ottawa and Dr. Baines, Toronto.

Therapeutics.—Dr. J. L. Davison, Toronto, will open a discussion on Expectorants, and will be followed by Dr. Taylor, of Goderich, and Dr. Gillies, of Teeswater.

Ophthalmology.—Dr. Ryerson, of Toronto, will read a paper on "The ophthalmoscope in relation to Diseases of the Nervous System," which will be discussed by Drs. Palmer and Wishart, of Toronto.

The following gentlemen will read papers:—Dr. Duncan, Chatham, "Duodenal Ulcers"; Dr. B. E. McKenzie, Toronto, "The Management of Club-foot"; Dr. Irving, Kirkton, "The Vomiting of Pregnancy and its Treatment"; Dr. Barrick, Toronto, "Hydrothorax"; Dr. T. R. Dupuis, Kingston, "Traumatic Tetanus and its Treatment." Dr. A. B. Atherton, Toronto, will report on a "Case of Hysterectomy for Fibroid," and will exhibit the specimen. Dr. Osborne, Hamilton, "A case of of Squint"; Dr. H. J. Saunders, Kingston, "Paroxysmal Hæmaturia"; Dr. Smith, Orangeville, "Ruptured Perinæum"; "Dr. McPhedran, Toronto, "Hæmoptysis"; Dr. Chas. Trow, Toronto, "The Diagnosis and local treatment of Tubercle, or so-called Phthisis of the Larynx"; Dr. Addison, St. George, "On the treatment of Pneumonia"; Dr. Groves, Fergus, "Perityphilitic and Pelvic Abscess"; Dr. Henderson, Kingston, "A case of Ichthyosis"; Dr. Fenwick, Kingston, "Etiology of Puerperal Eclampsia"; Dr. Johnson, Toronto, and Dr. Olmstead, Hamilton.

OPENING OF THE NEW WOMEN'S MEDICAL COLLEGE, TORONTO.

The opening of the new building on Sumach St. on the 25th ult., was an auspicious event in the history of this institution, as well as an important one in the matter of Medical Education in this Province. The ladies and gentlemen, who, through good report and evil report have struggled bravely onward against countless and apparently insurmountable difficulties, to the present happy consummation, are to be congratulated on the marked success which has attended their efforts. Perhaps as much credit is due to the Faculty as to any one connected with the movement. For a man or woman with means, it is not nearly so trying a matter to write a check in aid of such an undertaking as it would be to give a certain portion of their time each day at a certain hour, when perhaps other duties were pressing upon them, or weariness made the task a hard one. And yet this is what the members of the Faculty of the Women's Medical College have been doing, not for one, but for many winter sessions, with practically no reward except the approbation of conscience in good work done.

We congratulate the promoters of the institution, its friends, graduates, and students upon the very creditable position it has attained to, as one of the factors in our Educational System, and wish them every success for the future.

MEDICAL EXAMINATIONS.

TRINITY UNIVERSITY.

Primary Examination.

Class I.—*Honor Certificates*—D. Beattie, H. L. Barber, H. B. Anderson, H. C. Parsons, R. G. Wallace, J. J. Thompson, W. E. Mathew, D. McEachern, A. S. Tilley, A. Quackenbush, W. Cousens, T. M. Williamson, W. E. Brown.

Class I.—J. W. Brien, A. P. Chalmers.

Class II.—W. H. Millen, R. M. Mitchell and W. E. Sitzer (æq.), W. E. Ogden, H. J. Orchard, R. M. Curtis, W. Northrup and D. C. Jones (æq.), W. Potter, J. A. Mitchell, R. E. Cooper, W. M. Robertson, Miss J. Gray, H. Morell, E. B. Blain, G. K. McDowell, D. A. McPherson, Miss E. R. Gray, Miss A. Chambers, H. Robins, F. L. Switzer, E. F. McCullough, A. W. Allingham, W. O'Connor.

Class III.—D. B. Alexander, T. M. Allan, W. J. Awty, E. O. Bingham, R. A. Buck, A. M. Cleghorn, G. W. Davidson, Miss B. Dymond, R. G. Feek, A. Flath, J. G. Jardine, A. P. McLaren, F. C. Merritt, A. L. Murphy, F. C. Spilsbury, W. A. McPherson, J. A. Ogilvie.

1st Silver Medalist—D. Beattie.

2nd Silver Medalist—H. L. Barber.

Final Examination.

Gold Medalist and Certificate of Honor—F. R. Clarke.

Silver Medalist and Certificate of Honor—R. M. Hillary.

Certificates of Honor—A. Gaudier, R. Hill.

Class I.—R. J. Niddrie, E. J. Boyes and A. J. Murchison (æq.), J. W. S. McCullough, A. Ross, J. R. Macdonald, C. McCue, C. B. Oliver.

Class II.—C. A. D. Fairfield, A. H. Speers, J. Lockridge and J. F. Dolan (æq.), H. H. Gray, Miss S. P. Boyle, L. E. Rice and J. M. Sifton (æq.), J. F. Wren, T. B. Richardson, Mrs. J. Lynd and C. B. Coughlin (æq.), H. T. Arnall, J. H. Bell, E. T. Boyes, F. J. Ewing and Miss M. J. Hutton (æq.), A. P. Ardagh, Miss M. Agar, O. E. McCarty, M. McClelland, E. R. Morton, R. F. Hay, D. McLeod, W. S. Ferguson, G. Harrison, R. L. Langstaff, F. Preiss and H. W. Welch (æq.), G. J. Tweedie, J. C. Bell, W. Wright.

Class III.—F. A. Drake and E. H. Webster (æq.), L. E. Morgan, W. A. Gray and J. Housberger (æq.), J. B. Rogers, W. J. Fletcher, W. C. B. Murray, G. Wright, T. E. Watts, W. A. Jones, J. A. Dinwoody and D. K. McQueen (æq.), J. A. McGregor, J. C. Auld, A. C. Beatty and J. D. Berry (æq.), H. S. Smith, J. W. Dixon, D. A. Coon, W. A. Cameron, W. J. Alexander and J. Reid (æq.), S. J. Todd, J. A. Mills, W. A. Sargent, J. J. Gee, W. O'Connor, T. P. Camelon, M. Caves, C. W. Morey, H. E. Strathy.

TRINITY MEDICAL COLLEGE.

First Year—Scholarships.—The 1st First Year's Scholarship, $50, J. T. Robinson; the 2nd First Year's Scholarship, $30, C. B. Shuttleworth; the 3rd First Year's Scholarship, $20, J. A. G. Wilson.

Certificates of Honor—75 per cent. and over:—J. T. Robinson, C. B. Shuttleworth, J. A. G. Wilson, J. K. M. Gordon; H. G. McGill and R. E. Macdonald (æq.), A. B. McGill and H. Bird (æq.), F. J. Burrows, D. E. S. Sager, C. McPhail, T. Douglas.

First Class—70 per cent. and over:—J. Semple, W. Doan, M. S. Lane and W. W. H. Cartmell (æq.), R. T. Corbett, J. H. Duncan; J. R. Bingham and R. Brodie (æq.)

Second Class—60 per cent. and over:—H. Alger, G. D. McB. Ruthven, N. Campbell, E. Tomlinson and W. H. Tufford (æq.), W. J. Ross, J. T. Bowie, B. O. Coates, E. C. Coates, J. C. Stinson and J. A. Wesley (æq.), R. V. Fowler; R. E. Darling and F. W. Mulligan (æq.), D. J. Dunn, E. Orton, H. P. Temple, D. D. Wickson, P. J. Moloney, T. W. Carlaw.

Passed.—W. J. Arnott, R. S. Dowd, H. R. Frank, J. B. Ferguson, J. E. King, W. C. Belt, J. R. Roseborough, C. Carter, W. A. Thomson, D. A. McPherson, J. J. P. Armstrong, H. T. Thorne.

H. A. Maclean passes in Physiology, Botany, and Practical Anatomy. W. Brent passes in Materia Medica, Anatomy, Botany, and Practical Anatomy. D. Sylvester passes in Physiology, Materia Medica, Anatomy, Chemistry, and Practical Anatomy. H. St. J. Montizambert passes in Physiology, Anatomy, Chemistry, Practical Anatomy, and Botany.

Primary Examination—Scholarships.—The 1st Second Year's Scholarship, $50, D. Beattie; the 2nd Second Year's Scholarship, $30, H. L. Barber.

Certificates of Honor—75 per cent. and over:—D. Beattie, H. L. Barber, H. B. Anderson, H. C. Parsons, J. J. Thompson, W. E. Mathew, D. McEachern, A. S. Tilley, A. Quackenbush, W. E. Brown.

First Class—70 per cent. and over:—R. M. Mitchell, H. J. Orchard, R. M. Curts, W. Northrup.

Second Class—60 per cent. and over :—R. E. Cooper, H. Morell, E. B. Blaine, H. Robins, W. E. Switzer.

Passed.—T. M. Allan, G. W. Davidson, A. L. Murphy, D. B. Alexander.

Final Examination—Certificates of Honor.—75 per cent. and over :—J. S. W. McCullough, J. M. Sifton, J. R. Macdonald, F. R. Clarke, A. Ross, F. J. Ewing.

First Class—70 per cent. and over :—A. J. Murchison, E. J. Boyes, R. Hill ; H. H. Gray and R. J. Niddrie (æq.), J. F. Dolan, A. H. Speers ; H. T. Arnall and C. B. Oliver (æq.), F. A. Drake ; R. M. Hillary and R. F. Hay (æq.), L. E. Rice, T. B. Richardson.

Second Class—60 per cent and over :—C. McCue, W. J. Fletcher, O. E. McCarty ; J. F. Uren and L. E. Morgan (æq.), J. A. Dinwoody ; J. A. McGregor and H. W. Welch (æq.), A. P. Ardagh, J. L. Auld, R. L. Langstaff A. C. Beatty.

Passed.—W. G. Alexander, J. J. Gee, W. A. Jones, C. N. Laurie, J. Lockridge, E. R. Morton, R. McGee, J. A. Mills, F. Preiss, W. A. Sargent.

The Special Prize for the highest in Physiology of the First Year, value $25, A. B. McGill ; 96 per cent. in Physiology.

Medals.—The Second Trinity Medal, J. R. Macdonald ; the First Trinity Silver Medal, J. M. Sifton ; the Trinity Gold Medal, J. W. S. McCullough.

THE THERAPEUTICS OF CHLORALAMIDE.—So many new drugs are being put on the market, that no practical physician can hope to take cognizance of all of them. The Germans manufacture new compounds ad infinitum, and have been doing so for years, but only a few have taken and held any recognized place in the therapeutics of to-day. Chloralamide is a comparatively recent one, but it would appear that it has come to stay. In an interesting article on this drug by Dr. Steele, Pacific *Med. Jour*, he gives the following as its therapeutical indications :—Chloralamide is successfully employed in conquering insomnia, and particularly that form denominated simple or idiopathic insomnia, not due to excitement or severe pain. It is, futhermore, possible for the wakeful patient to enjoy several nights of natural sleep after a single dose. The best results occur when the drug is used in insomnia due to nervousness, neurasthenia, hysteria, "spinal disease" or old age ; next best when the causes are chronic alcoholism, alcohol excess, cardiac and bronchial asthma, pleuritis, phthisis, pericarditis, arterial sclerosis, organic heart disease, typhoid fever, gastritis, subacute nephritis, ascites, diabetes mellitus and in the morphine habit. It is less effective when wakefulness is due to tabes dorsalis, neuralgia, progressive paralysis, the excitement of insanity, cerebral softening with delirium, melancholia, chronic mania and acute mania. In these conditions, doses of from thirty to sixty grains are required, providing such doses are tolerated. The drug is useless when the insomnia results from paralytic dementia, maniacal excitement or hallucinations, severe neuralgia or other pain, violent cough, distressing headache, delirium of cerebral apoplexy and from delirium tremens. Even pain, when not acute, is often relieved, and the large doses necessitated are, by many patients, preferred to morphine. Chloralamide, in doses of from twenty to sixty grains, has checked the pains of thoracic aneurism, carcinoma of the stomach and liver, sarcoma of a rib, erysipelas, rheumatic fever, floating kidneys, neuralgia, gallstone, varicose ulcer and alcoholic neuritis. In chorea, a boy of eleven years of age was cured in five days by fifteen grains of the drug three times daily, and in like manner, a girl, after receiving no benefit from other forms of treatment, was afforded relief in eight days. When administered in phthisis it was found that the troublesome night sweats disappeared.

THE RELATION OF THE PANCREAS TO DIABETES.—There are two chief theories for the explanation of the facts of diabetes, writes M. Lépine (*Lyon Med*) : The first that the glucose in the blood is not oxidised as much as in the normal state—a view supported by the low temperature of the diabetics ; the second that too much glucose is produced from the food, perhaps by the liver. This may be due to nervous influence, and may explain the usefulness of opium and antypirin. Both theories may be in part true, but they are incomplete : they do not explain cases of pancreatic diabetes. Such cases M. Lancereaux has proved to be genuine ; and when there is complete atrophy of the pancreas there is always sugar to be found in the urine. MM. Mering and Minkowski have recently shown that in the case of dogs complete removal of the pancreas is followed by the passage of sugar, but that this is avoided

if a small part of the pancreas is left, even though the duct is removed. The result consequently is not due to the absence of the pancreatic juice in the intestine. It is most easily explained by the hypothesis that the pancreas manufactures a sugar ferment, which is absorbed by its veins and carried to the liver by the portal vein, where in a normal condition it helps the usual change of glucose. An experiment was carried out on two dogs of equal size. They were both kept fasting for thirty-six hours. The first was left untouched and unfed for sixty hours, and then bled to death. The second had the pancreas completely removed some time before; and after fasting sixty hours was also bled to death. When the blood was taken from the two bodies there was nearly three times as large a percentage of sugar in the one without its pancreas as in the other; and the other important point was that after the two specimens of blood had been left for fifteen hours under the same conditions, the blood from the healthy dog had lost 33 per cent. of its sugar, whilst that from the other dog had only lost 6 per cent. This M. Lépine considers to be proof of the loss of ferment in the animal that had previously been deprived of its pancreas.

THE WILLIAM F. JENKS MEMORIAL PRIZE.—The second triennial prize, of four hundred and fifty dollars, under the deed of trust of Mrs. William F. Jenks, will be awarded to the author of the best essay on "The Symptomatology and Treatment of the Nervous Disorders following the Acute Infectious Diseases of Infancy and Childhood." The conditions annexed by the founder of this prize are, that the "prize or award must always be for some subject connected with Obstetrics, or the Diseases of Women, or the Diseases of Children"; and that "the Trustees, under this deed for the time being, can, in their discretion, publish the successful essay, or any paper written upon any subject for which they may offer a reward, provided the income in their hands may, in their judgment, be sufficient for that purpose, and the essay or paper be considered by them worthy of publication. If published, the distribution of said essay shall be entirely under the control of said Trustees. In case they do not publish the said essay or paper, it shall be the property of the College of Physicians of Philadelphia." The prize is open for competition to the whole world, but the essay must be the production of a single person. The essay, which must be written in the English language, or if in a foreign language, accompanied by an English translation, should be sent to the College of Physicians of Philadelphia, Pennsylvania, U. S. A., before January 1, 1892, addressed to Louis Starr, M.D., Chairman of the William F. Jenks Prize Committee. Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year. The Committee reserves the right not to make an award if no essay submitted is considered worthy of the prize.

MEDICAL EXAMINATIONS IN VIRGINIA.—The constituted authorities in Virginia have been endeavoring for some time past to rid the State of the vast army of quacks by which it is overrun. This effort has been made none too soon, as the following answers to the questions set will show. The answers were given by *graduates of Medical Colleges*, who, under the law now in force in Virginia, applied for license to practise medicine in that State. The condition of affairs evidenced can hardly be conceived of by us in Canada.

Describe the larynx. A.—The larynx is composed of cartilage. The œsophagus passes through the larynx.

What is the function of the liver? A.—Do not know.

Give tests of arsenic. A.—Sulphuretted hydrogen is one. Don't know rest.

Give test for mercury. A.—Do not remember.

Give dose of tartar emetic. A.—Ten grains.

Give dose of sulphate of atropia. A.—Hypodermically, ten grains; by mouth, sixty grains.

Give dose of corrosive sublimate. A.—One grain.

How would you treat placenta prævia? A.—I don't know what it is.

Give dose of powdered cantharides. A.—Forty grains.

What is the source of iodine? A.—It is dug out of the earth in blocks, like iron.

Describe dengue or breakbone fever. A.—By four applicants: A fever that comes on soon after the bones are broken. By one applicant: The patient should be cautioned against moving, for fear the bones should break.

Describe the peritoneum. It is a serious membrane lining the belly, and extending into the chest, covering the heart and lungs.

THE TREATMENT OF POST-PARTUM HÆMORRHAGE.—Küstner (*Deutsche Med. Woch., Am. Jour. of the Med. Sciences*) regards post-partum hæmorrhage as generally caused by improper management of labor. Death from this cause rarely occurs in good hands. Hæmorrhage from the vagina and cervix may be immediately checked by closing the lacerated tissue by a stitch or by an antiseptic tampon. Uterine hæmorrhage may be avoided by emptying the uterus slowly; the child's body should never be removed forcibly, but should be expelled by uterine contractions; traction should be made by forceps with the pains only. Rapid delivery of the placenta should be avoided; at least fifteen minutes should elapse before any effort is made, and then uterine contractions should be aided, not superseded, by pressure. Cornutin is thought the best preparation of ergot for use in these cases.

There remains a class of cases in which hæmorrhage is not caused by failure of uterine contraction, as usually, but by rupture of an artery or atheromatous degeneration and rupture of the vessels at the placental site accompanying nephritis, in which the intra-uterine tampon is indicated. In cases occurring where the practitioner has no assistance the tampon may be easily, quickly, and safely applied in all cases of post-partum bleeding; iodoform gauze is the best material. Kustner reports eight cases successfully treated by this means.

A NEW TREATMENT FOR CHANCROIDS.—Dr. G. Letzel, of Munich, says *The Weekly Med. Rev.*, describes a treatment for chancroids which he has employed for some time with excellent results. The results attained by Winckel in the treatment of tears and abrasions occurring in labor by painting with solutions of chloride of iron induced Letzel to employ the same remedy in soft chancres. He was careful to use it only in cases in which no other treatment had been undergone, the cases coming into his hands on an average about eight days after infection. The sores were painted with the undiluted solution once daily for about four days, at which time they were usually found to be covered by smooth, healthy granulations, after which five or six days' use of sublimed calomel as a dusting powder would suffice to cover the sore with a growth of epithelium. The glandular swellings in the groin rapidly disappeared with the use of strong lotions of the subacetate of lead.

The pain caused by painting the sores as described was easily borne, and there was but little inflammatory reaction around its margins. The paintings seemed to have no influence upon the swellings in the groin. In but two cases was the pain so severe as to require the previous application of cocaine, and in these the patients were very nervous individuals.

A point of some importance is that the applications must not be entrusted to the patient, but should be carried out by the physician himself, by means of a small wad of absorbent cotton which is held applied to the sores for some little time, and with which all parts of the sore are brought in contact.

CHLORAL IN RIGID OS.—A. W. Garry gives a case (*Br. Med. Jour.*) in which, with a rigid os, the pains had been strong but ineffectual, and the patient was becoming exhausted, with dry tongue, quick pulse, etc. He gave 15 gr. of chloral, intending to repeat the dose every half hour till a drachm had been taken. After the second dose, however, the os was sufficiently dilated to permit delivery by the forceps. He adds:—"From my experience, both in hospital and private practice, of the use of this drug in the treatment of the above condition, I am of opinion that it is vastly superior to any other pharmacopœial preparation, when properly administered and with due precautions (should not be given, or at least very cautiously, in a case where fatty heart or atheromatous arteries is suspected), and would strongly recommend my young medical friends to give it a trial before adopting extreme measures, which, in my opinion, are rarely if ever required."

DILUTE sweet spirits of nitre is said to be an efficient application for the acute stage of ivy poisoning,

CHLOROFORM WATER IN CROUP.—Dr. Bashere has lately obtained excellent results (*Med. Rec.*) from chloroform water in the treatment of false croup, and regards it as superior to chloral in this affection, in that is is not so dangerous and is eliminated in part by the lungs. Of course its action is local, and its value, probably, due to the sedative effect upon the sensory filaments of the superior laryngeal nerve. He uses a solution consisting of 5 to 10 minims of chloroform to an ounce of water, to which is added a little glycerine to aid the solubility of the chloroform. A teaspoonful of this is given every half hour during an attack, and if there is any dyspnœa the following day, a teaspoonful is given every two hours, increased in frequency to every hour during the evening. This method of treatment is especially applicable to those cases in which the dyspnœa and cough continue during the day.

GLYCERINE OF BORAX IN DIARRHŒA OF INFANTS.—E. Mansel Sympson has found glycerine of borax to answer capitally (says *The Lancet*) in diarrhœa of infants. The children like it, it lessens griping, renders sweet the offensive motions, and stops the diarrhœa. Its use may be supported by the following theoretical arguments: In diarrhœa infantum, the character of the motions suggests excessive fermentation of the contents of the alimentary canal. Glycerine and borax both possess well known antiseptic and soothing properties. The ordinary dose for a child is about twenty minims given every one, two, or three hours, according to the severity of the symptoms. The medicine should be diluted with a teaspoonful of distilled water, and flavored to suit. Glycerine of borax is composed of one ounce of borax in five fluid ounces of glycerine.

DR. G. S. RENNIE, L.R.C.P. & S., Edinburgh and Glasgow (Trinity Medical College), has recently passed the L. R. C. P. London Examination. Dr. Rennie intends to remain in England in attendance upon some of the metropolitan hospitals until October, when he will return to Canada.

CARBOLISED OIL IN SCABIES.—Dr. Tresilian, (*British Medical Journal*) has had excellent results from the use of Carbolised oil, 1 in 15 of olive oil, as a local application in scabies.

CARBONATE OF AMMONIA IN MASTITIS.—Dr. J. R. Frith, writing to the *Weekly Medical Review*, says: "I wish to state the mode I have used for the last six or seven years, invariably with marked success. I do not remember where I obtained it, and never since I commenced its use have I had need for the lance. Even in cases where I have thought it impossible to prevent the formation of pus, I have been able to succeed with it. Simply use carbonate of ammonia (℥ij), boiling water (℥viij). I saturate in this solution a flannel bandage three inches wide and two feet long, and apply to breast, covering this with oil silk. Solution is used as hot as can be borne, and is renewed every two or three hours. Relief will be derived from the first application.

BORIC ACID IN ACNE.—Dr. Sarah Post (*Med. News*) says she has had very satisfactory results from the following treatment of acne:—Bathe the face at night in hot water containing a few drops of ammonia; do not use soap. Rinse the face in cold water; dry the face. Then apply the solution, half an ounce of boric acid in eight ounces of alcohol, perfumed if necessary, sopping it on with the corner of a handkerchief or a piece of clean soft rag. In the morning do not wash the face, but apply the solution. Carry the solution with you, and apply it several times a day if the skin becomes moist.

SOME USES OF CREOLIN IN GYNÆCOLOGY.—Chiron has given considerable attention to the therapeutics of this remedy. For specific vesical inflammation he holds it very useful. He used two and five per cent. solutions without causing pain or any toxic symptoms, while the trouble was speedily relieved. In gonorrhœal vaginitis and endometritis he used douches and applications of a five per cent. solution with marked benefit. Creolin gauze was found to be a good substitute for iodoform in tamponnade of the uterine cavity.

ANTI-PRURITIC OINTMENT.—Dr. Bulkley (*Coll. and Clin. Rec.*) recommends:

℞—Camphor,

Chlor. hydrat., ... āā ℥ j

Rub together till a liquid results and add one ounce of rose water.

COLLEGE OF PHYSICIANS AND SURGEONS, N. W. T.—The first meeting of the Council of the College of Physicians and Surgeons of the North-West Territories was held on the 10th of March, 1890, at Regina, N. W. T., and the following officers were appointed:—Dr. O. C. Edwards, *President;* Dr J. D. Lafferty, *Vice-President;* Dr. R. B. Cotton, *Reg. Treas.;* Drs. O. C. Edwards, R. G. Brett and R. B. Cotton, *Executive Committee.*

CANADIAN MEDICAL ASSOCIATION.—The meeting of this Association for 1890 will take place at Toronto, September 9th, 10th and 11th. A Committee of Arrangements has been appointed, with Dr. Canniff as chairman. This Committee has met, and taken into consideration the various means by which the meeting in the Queen City may be made most pleasant and profitable to the visiting brethren.

ONTARIO MEDICAL ASSOCIATION.—As the Provincial Elections take place, on the 5th June, it has been decided to postpone the Meeting of the Ontario Medical Association to the following week. The Association will therefore meet in Toronto, on Wednesday and Thursday, the 11th and 12th of June.

DR. V. H. MOORE, of Brockville, has been elected for another term of five years, as representative of Queen's University, to the Ontario Medical Council.

DR. WILLIAM T. HARRIS, of Brantford, has been re-elected the representative of Trinity University on the Medical Council of Ontario for another term of five years.

Books and Pamphlets.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX, FOR 1890. Edited by P. W. Williams, M.D., Secretary of Staff, assisted by a corps of thirty-six collaborators—European and American—specialists in their several departments. Six hundred octavo pages. Illustrated. $2.75. Toronto: J. A. Carveth & Co.

The eighth yearly issue of this handy reference one-volume manual is at hand. In its Alphabetical Index of New Remedies and its Dictionary of New Treatment it richly deserves and perpetuates the well-earned reputation of its predecessors. In this volume its corps of department editors has been largely increased, and important papers upon "Thermo-therapeutics," "Electro-therapeutics," "Sanitary Science in City and Country," and "The Medical Examiner in Life Insurance," are features of special interest. It is truly a helpful volume, a *résumé* of the year's progress in medicine, keeping the busy practitioner abreast the times with reference to the medical literature of the world. While there is a generous increase in size and material, the price remains the same. There are few practitioners of medicine, be they ever so well read in the advances made in therapeutics or in the introduction of new remedies, who will not derive valuable information and instruction from the perusal and study of this interesting and comprehensive book.

MAY'S DISEASES OF WOMEN, being a concise and systematic exposition of the theory and practice of Gynæcology, for the use of students and practitioners. Second edition, revised by Leonard S. Rau, M.D., attending Gynæcologist to Harlem Hospital, etc.; with thirty-one illustrations in wood. Philadelphia: Lea, Bros. & Co. 1890. Toronto: Vannevar & Co.

The first edition of this work appeared in 1885, and has always been popular as a concise exposition of the subject treated of. It is useful to the student desiring to review his work, and refresh the mind on matter obtained from more extensive works. In the present edition the editor has brought the work up to the latest date as regards new theories and methods of treatment. It may be regarded as one of the best of its class of compends.

EXAMINATION OF URINE, CHEMICAL AND MICROSCOPICAL, FOR CLINICAL PURPOSES. Arranged in the form of questions and answers, by Laurence Wolff, M.D., Demonstrator of Chemistry, Jefferson Medical College, etc. Colored plate and numerous illustrations. Philadelphia: W. B. Saunders. Toronto: Vannevar & Co. 75c.

This little work presents the subject more from the clinical than the chemical standpoint. It will not take the place of more elaborate works on the subject, but as an *aid*, for which it is intended, it is excellent.

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Original Communications.

THE PREVENTION OF PUERPERAL FEVER.*

BY WM. BRITTON, M.D., TORONTO.

A few weeks ago I attended Mrs. S. in labor. She passed through its various stages in a perfectly normal manner, and gave birth to a well-developed and apparently healthy child.

Being an extraordinarily robust woman, and feeling none of the weakness that usually exists after so short an interval, on the fourth day she requested permission to get up, which, of course, was ungallantly refused.

I have reason to believe, that on the following morning she took the reins in her hand and tried the experiment with the result of a violent chill, followed rapidly by a temperature of 106. The ordinary remedies were used, and whether *post* or *propter hoc* I do not know, at any rate the alarming symptoms disappeared inside of forty-eight hours.

I had always been taught both by precept and experience thatif this was puerperal fever, its rapid decline must be looked upon as most extraordinary. Bearing in mind the distinction drawn by Heath, between sapræmia, a comparatively harmless and evanescent septic intoxication without the entrance of bacteria, and septic infection proper, depending on the presence of these organisms, I concluded that this case, so violent at the outset, and yet so amenable to treatment, should be placed n the former class. Backed up as my convictions 'ere by the weight of authorities, I do not know hat I would have hesitated immediately after the atient's recovery to attend another case of labor; ut fortunately for the rate of mortality amongst ring-in women, in a day or two fresh developments appeared. I was hastily summoned to reduce what appeared to the parents as a dislocation of the infant's shoulder. Instead of such an injury I found a rapidly forming abscess in the acromio-clavicular articulation. This was soon followed by another in the wrist and one in each temporo-maxillary joint. As a profound jaundice set in subsequently, one may safely infer that there were similar lesions in the liver.

The connection between mother and child had not ceased in this case with the snipping of the umbilical cord, for the diseased condition of the former, which must have been true septic poisoning, had evidently infected the infant, and, as if to prove the interchangeable character of the different types of puerperal fever, although the mother's case was one of fever pure and simple, the child evidently was in a pyæmic condition.

These occurrences more than ever impressed my mind with the necessity for early diagnosis in such cases, and the vital importance of the attendant taking every precaution lest he become emphatically the messenger of death.

Although known by many other names, this disease has through the whole history of medicine attracted the notice of authors; and no work on the subject either ancient or modern has failed to refer to its obstinate nature; but, strange to say, the most of them pay more attention to epidemic influence than to anto-infection.

Woman, even in the most favorable surrounding circumstances, while in child-bed has within herself the factors that may conspire to produce any or all of the septic manifestations; and for this reason science, with its discoveries has, up to the present, been time and again outwitted in its effort to overcome this inherent tendency that has existed in all past generations.

Indeed I do not know that Mother Eve had not a dose of it; at any rate pre-disposition existed. It is quite probable that at some time in her married life she was a primipara, therefore the more liable to lacerations, and her spouse not having had access to either Tyler Smith or Playfair could not have been a much better obstetrician than ourselves; therefore it is safe to conclude that in spite of all his skill the first infant in its exit from an embryo state left behind it abrasions of the os.. At the very least we may infer, if she was constructed like her daughters,

*Read before the Toronto Medical Society, May 20, 1890.

that thereafter she carried under her fig-leaf apron an imperfect fourchette.

After labor even in uncomplicated instances, surfaces of greater or less extent, denuded of epithelium, always have and always will exist; therefore, even in the midst of the most favorable surroundings figuratively speaking, the arm is scratched and ready to receive the vaccine virus; and it is no wonder that so many lives have been lost through this dire disease.

Hippocrates refers in no obscure way to its fatal tendency and the literature on the subject from his time to the present invests the matter with the greatest importance.

About twenty years ago a table of statistics as to the mortality of childbirth was carefully compiled; and, although, thanks to the influence of Lister and others, the rate had been considerably lowered, still there occurred annually in England and Wales about three thousand deaths from the different varieties of lying-in complications, two-fifths of which were set down as pyaemia, puerperal peritonitis and the other febrile and inflammatory conditions which, being so often observed to have an interchangeable character, for the sake of convenience may rationally be embraced in the generic term puerperal fever.

Perhaps in the whole range of scientific medicine there is no subject that has had so many zealous advocates of opposing theories in reference to its pathology and treatment; but, from the days of Ramsbotham and Gooch down to the present, all seem agreed as to the formidable character of the disease when once the first symptoms are pronounced.

In a very large proportion of instances remedial agents can accomplish little more than the mitigation of suffering, and if preventive measures have been neglected there is not much consolation for the attendant in the reflection that if the stable door had been locked a little sooner the steed would not have been stolen.

The pertinent question then presents itself, what can we do to obviate this wide-spread, and often needless loss of life in the high tide of its usefulness and responsibility?

Whether it be the manifestation of other forms of common disease in the peculiar physical conditions of the puerperal state, the type being modified by these conditions; or a specific disease *ab initio*, it matters not; nor are we much concerned about the adverse opinions held by eminent obstetricans as to its claims for classification in the inflammatory affections on the one hand or the febrile on the other; we only know that out of nothing, nothing comes; the mind naturally reverts from effect to causation; and a careful investigation of the avenues through which enter the specific causes of the disease, will, in this instance, best conduce to the success of preventive measures.

I do not hope to advance anything new on the subject nor to put the matter in any better light than we can see it portrayed in our every day text-books; but where so much is at stake a reiteration of threadbare facts will perhaps serve to deepen impressions that are apt to be effaced by the multitude of other cares that crowd into a physician's life.

Therefore I shall enumerate as briefly as possible these causative factors, premising with a short reference to theories held in the past.

Ritgen considered it dependant on a metastasis, not of the milk, but of the blood destined to form that secretion from the breasts to the peritoneum; and this doctrine was, I presume, the origin of the crude notions on the subject that obtain amongst so many old women to-day.

Legallois thought it arose solely from the absorption of pus from the endometrium. Cruvelhier and the great Sir James Simpson likened the intrauterine surface after delivery to a stump after amputation, and as early as 1774, Kirkland contended that the disease was produced by the absorption of putrid materials from within the uterus.

All seem pretty well agreed that in every form of puerperal fever there has been absorption from a raw surface usually, exceptionally through the lungs, and that septic changes are the result. Whether these changes are the direct effect of the micro-organisms upon the tissues and fluids with which they come in contact, or whether they produce a virus in the process of nutritive activity, or whether, as is probable, both suppositions are correct, must be decided by future investigations; but of one thing, Lusk says, there is no reasonable doubt, viz.: That the connection between sepsis and bacteria is constant and vital.

Waldeyer, Orth and Von Recklinghausen found the lymphatics of the uterus filled with pus-like

masses, which consisted chiefly of pus corpuscles and bacteria, and this investigation being carried on in the regions of metastasis, similar appearances were observed ; and to test the correctness of conclusions these were cultivated in sterilized fluid and having been injected into the tissues of healthy animals, results followed which in their pathological character and order of appearance were in many respects identical with the symptoms of some types of puerperal fever in the human subject.

So it seems to be fairly well established that before puerperal fever can exist there must be absorption of some form of either on organic ferment or micro-organism.

In discussing the subject, the occassional epidemic character of the disease is left out of consideration, for the reason that such would only indicate extra precautions in the way of isolating the patient and placing her in the most favorable surrounding circumstances ; in addition to which certain prophylactic remedies, such as iron, quinine and chlorate of potash might with advantage be used for some time prior to delivery.

But as such epidemics are rare, excepting when there is a prevalence of typhus, erysipelas or other diseases whose septic factor is also potent in puerperal fever, in our search for causative conditions we are practically limited to the susceptibility of the patient and the possibility of contact with or conveyance from some source of putridity.

Pure oxygen apart from moisture is said to be one of the best germicides, therefore to deliver a woman in a cramped apartment, badly lighted and worse ventilated when a better one is to be found is a dereliction of duty that cannot be too strongly condemned ; and for the same reason as well as to avoid direct infection, many have been the efforts to have the large lying-in-hospitals transformed into groups of small cottages.

In this connection it would be a waste of your time to quote statistics as to the comparative mortality in hospital and private obstetrical practice.

The products of decomposition afford the best possible opportunity for sepsis; if cleanliness is next to godliness, the adage is certainly not untrue in the practice of midwifery. The instincts of a gentleman forbids his appearing in the presence of the gentler sex with stained person and filthy clothing,and a due sense of his responsibility as a physician demands that he add nothing to her other dangers in the hour of woman's greatest peril by allowing communication, even the most indirect, with any form of putridity either in the living or dead.

In lying-in hospitals, unless the safety of the inmates is to be estimated at the lowest, a certain time should be set apart for student attendance, not coincident with that for making dissections.

At a certain period in the history of the Vienna Hospital the percentage of deaths was much lowered by this precaution.

An obstetric bag should not be considered complete without a proper supply of antiseptics to be used freely on the hands and instruments, and perhaps the old fashioned carbolic acid or perchloride of mercury is as good as any ; and rather than run the risk of being limited to rancid castor oil or worse, pork fat, with which to anoint the fingers it would be well to invest the sum of half a dime in carbolized vaseline..

I am afraid that I cannot subscribe to the teaching of a celebrated Edinburgh authority when he avers that a complete bath in carbolized water followed by another containing corrosive sublimate, and an entire change of clothing, removes responsibility from one's shoulders, when he goes from an infectious case to attend on labor. I have grave fears that after having taken all these precautions, I may have in one instance conveyed the disease, but fortunately for my peace of conscience, circumstances turned out favorably and I was not forced to hide the mistake six feet under ground.

As already mentioned, few labors occur without some abrasions, be they ever so slight, and these, before granulations appear or primary union occurs, are the open doors through which disease ordinarily creeps in.

The character of the labor and the condition of the tissues in its earlier stages, together with the nature of the means employed for effecting delivery, will ordinarily put the attendant on his guard to search for lacerations of the os, but owing to its swollen and softened condition these cannot always be found ; nor will it be easy to discover abrasions of the vagina, which are said to exist frequently. If there are reasons to suspect the presence of these, although they may not be per-

ceptible to either sight or touch, it is a safe precaution to use a vaginal douche, carbolized one in forty, or of corrosive sublimate, one in two thousand, and preferably in a continuous stream from a rubber bag or other form of fountain syringe.

Lesions of the vulva or perineum, too small to require operative interference, are recommended to be mopped with a mixture of equal parts of Monsel's solution and tincture of iodine in three or four times as much water.

It is taken for granted that the placenta and membranes have been carefully examined for evidence of retained portions, especially when removed artificially.

The question of intrauterine irrigation has had its ardent disputants, and while there is much to be said on both sides, it seems reasonable that they should be resorted to after all manual operations for the removal of the child or the afterbirth. I have never seen more than a passing chill produced by them when properly applied, although more serious results do occasionally follow, but I am sure I have witnessed cases in which there was much regret for their omission.

A flabby uterus means a host of exposed absorbents ready for whatever comes along; it also predisposes to the retention or subsequent formation of clots which naturally become putrescent, and no one should pay a second visit to his patient without ascertaining its approximate size by external manipulation.

Ergot, which is often given after the birth of the head, is indicated here after the clots and imprisoned discharge have been removed.

Sudden increase of the lochial discharge and a return to its sanguineous character at any stage of the lying-in period often points to retention.

In some hospitals the laudable custom is followed of using antiseptic absorbent pads instead of the ordinary napkin for the vulva, but for obvious reasons this is not often feasible in private practice.

During the progress of septicæmia but few bacteria are found in the blood, while they exist in abundance in the urine, which would go to show that they are removed from the circulation to a large extent through the kidneys.

Perhaps the attention often given exclusively to the bowels during the first few days after childbirth, if directed in part to the other emunctories, might occasionally obviate an attack of puerperal fever.

I have never found a good drink of water—even Toronto city water—bring on an attack of puerperal fever, and although common prejudice opposes its free use in the lying-in chamber, it cannot do otherwise than aid in the elimination of effete material. Sewers must be flushed out occasionally for sanitary reasons.

In former years when the antiphlogistic treatment was carried to its extreme point of tolerance in surgical cases the patients were more prone to inflammatory and febrile complications than nowadays. It is a well known fact that venesection favors absorption; hungry blood vessels take whatever they can get, good or bad; therefore a fairly generous diet would probably conduce to the lying-in woman's welfare and safety.

I did not take notes in every instance, and must draw from memory in referring to causation in a few of the cases I have seen in my own practice and in consultation with others. Although I think it quite possible, I have never witnessed the conversion of the scarlatina poison into the puerperal. On two occasions against my own convictions I was forced by unavoidable circumstances to deliver the mother in a room adjoining one in which lay children in the midst of scarlatina, and this was followed by no untoward consequences. A patient of mine had been in abject poverty up to the time of delivery; together with this her mind was much depressed on account of some grave family matters. After having given birth to twins without much difficulty or any injuries that I could find, and with antesiptic precautions, a fatal attack of peritonitis followed. The only predisposing causes that I could discover were those already mentioned and the unsanitary condition of the house which was unavoidably incapable of proper ventilation. In contradistinction to this I may mention that some years ago in the month of November during the whole of one cold night I literally danced attendance on a gipsy in her confinement which, considering that it took place under a tent of thin oiled cotton, was quite as tedious for me as it was for the patient. There was ventilation without measure and perhaps as scientific as could have been obtained, with the best hospital equipment; I never saw a more satisfactory recovery, and the gipsy was at her old

calling of fortune telling inside of ten days. I once saw in consultation a case of true septicæmia, that followed a protracted and severe delivery, ending instrumentally and with a complete laceration of the perineum; and although proper antisceptic precautions had been taken, the extensive wound had been left open; absortion was rapid and fever the result.

Five years ago I confined a patient who gave a history of having had, as she termed it, inflammation of the womb after each labor. On this occasion pelvic trouble supervened eventuating in an abcess which discharged per vaginam.

The predisposing cause evidently had been in existence at the starting point of the disease.

One instance I have seen of an attack of puerperal peritonitis having followed communication with a patient suffering from phlegmasia dolens with pulmonary complications; and one of septicæmia in the same manner related to another of multiple abcess; and, to me convincing proof of the highly infectious character of most forms of puerperal fever and inflammations, lies in the fact that I know of two cases of pelvic peritonitis, one of pyaemia, and two more of endometritis, having all been conveyed from a single case of septicæmia.

I need not narrate further; these cases will suffice as examples, and knowing the causes that usually operate we are in the best position for meeting them before results appear.

I hope I have not trespassed too far on the time of this meeting and shall conclude with the mention of a few salient points, which statements, from their necessary brevity, may possibly have the appearance of dogmatism.

1st. There may be some doubt as to the risk of infection in certain childbed inflammations, the natural outcome of local lesions without septic changes.

2nd. Defective excretion, an impure or impoverished condition of the blood, protracted labor, excessive hæmorrhage, the deep and hidden situation of wounds such as are apt to occur during delivery; the enlarged lymph spaces of pregnancy, hypertrophied veins and lymphatics and these bathed in the lochial discharge—not the best antiseptic fluid, all act as predisposing causes; and the last named histological conditions render the patient more prone to take on puerperal fever, than exposed wounds either surgical or accidental, to be followed by septicaemia.

3rd. Puerperal fever in most, if not all its types is essentially a putrid disease, closely allied in its origin to erysipelas, scarlatina, etc., and is not only eminently infectious but capable of being transmitted through fomites to which it may adhere for a considerable period of time.

4th. Prior to delivery the patients' health should be maintained at the highest possible standard in order to repel any unforeseen attack.

5th. A lying-in chamber should be in as sanitary a condition as though there was a possibility of Cæsarean section becoming necessary.

6th. During the first stage too frequent examinations are to be avoided as well as the pernicious practice of forcible digital dilatation, excepting when indicated by special circumstances; and should instrumental aid be necessary the use of Barnes' bags is less liable than sponge tents to be followed by absorption.

In the next stage, bearing in mind the possible remote consequences, all manual and instrumental interference should be in the cleanest manner, and so arranged as to produce but trifling lesions. The afterbirth if watched properly and left chiefly to the efforts of nature will be more likely to come away in its entirety; and in removing it from the vulva my experience has been that unless special attention is given, portions of membrane are very apt to be left behind in the vagina, or worse still in the uterus, and thus become the source of anto-infection.

During the whole course of his attendance I do not know a duty more incumbent on the accoucheur than that of securing perfect and permanent emptiness and contraction of the uterus.

7th. Too often after delivery the various excretions are neglected, especially the urinary.

8th. Vaginal irrigations, provided that due care is taken to avoid forcing offensive fluids back into the uterus, are never objectionable, and should not be omitted if there is unnatural odor. Owing to the posture of the patient, drainage is not assisted by gravity; in the heated vagina the lochial discharge is apt to lie and decompose; in the majority of cases hidden abrasions exist and absorption is easy.

9th. Intrauterine lotions are indicated after manual delivery and artificial extraction of the placenta.

10th. The strictest antiseptic precautions should

be taken in dealing with every lesion that occurs, no matter how slight its extent; and where such is suspected from the nature of the case, the most careful inspection of the genitals should take place.

A RATIONAL METHOD OF OBTAINING EXTENSION OF THE SPINAL CORD AND COLUMN.*

BY CHARLES F. STILLMAN, M.D., CHICAGO, ILL.

(*Continued from May Number.*)

There is, however, a limit to the efficiency of the vertical traction or suspension, owing to the fact that traction in this direction cannot in severe cases bring to bear sufficient *oblique* force to overcome extensive rotation, for the value of suspension as an agent to produce extension of the spine is limited by the amount of weight which is suspended, and in many cases sufficient weight cannot be thus utilized without discomfort or even injury to the patient.

For the more scientific and complete reduction of the deformity in Lateral Rotary Curvature, I beg to direct your attention to the use of the curved board during the traction. It is obvious that the reduction of the deformity by traction should be effected before any other measures can be adopted successfully, and by means of these frames this reduction can be accomplished without the fatigue attending the process of suspension by the Sayre method and with more satisfactory results. *Traction on a backward oblique curve* fulfils the indications completely. By this method not only is the spine stretched on a posterior curve, so that the bodies of the vertebræ are more unlocked and separated than by the vertical method, but the rotation is also assisted by the direct pressure of the curved board upon protruding parts, a feature not possessed at all by Sayre's suspension, and which tends to reduce the deformity much more satisfactorily.

If the recumbent frame be used it possesses the great advantage of being so comfortable for the patient that it can be employed for hours at a time, thus combining with traction the principle of rest in a favorable position. The patient is first directed to lie upon the back, the feet being secured in the foot pieces and the pelvis kept flat upon the board. The trunk is now to be twisted in a direction opposite to the curvature and traction upon the spine secured by a weight at the head. If the curve of the board is now increased by means of the screw underneath, the apparatus will exert a traction force upon the spine which will tend to obliterate the deformity more perfectly than by any other method in use. In the upright frame the same effect can be produced but it cannot be so long continued without fatigue for the patient. A great advantage possessed by these frames lies in the fact that gymnastic exercises (with dumbbells, elastic cords, and pulleys and weights), tending to increase the muscular developments and vitality of the patient, can be practiced while the spine is in a state of traction and the deformity reduced. Such exercises only tend to increase the curvature if practiced when the deformity is not reduced, owing to the influence of the superincumbent weight in furthering its development. It is now almost three years since I advocated the use of these frames before the orthopædic section of the New York Academy of Medicine* and demonstrated the principles upon which they were founded, and they have been in actual use by me for the last five years with eminently satisfactory results.

But I am not alone in my position regarding the requisites for successful treatment of this deformity. During a discussion of the subject before the Section of Surgery in the New York Academy of Medicine† last year, Prof. A. B. Judson stated that "he thought it advisable to place the patient in such a position that the deformity becomes reduced as far as practicable and then have him remain in that position as much as possible each day." He "recognized the importance of superincumbent weight in the direct causation of the deformity, and believes that a patient should, while lying down, assume such a position as to produce a *lordosis*." "In rotation of the spinal column," he believes "the anterior portion of the vertebræ to be most at fault," and he, therefore believes "*the pressure should be removed from the anterior part of the vertebræ to the posterior*," and he also holds the view "that whatever increases the

* Read before the Chicago Medical Society, Dec. 2, 1889.

* See page 570 *The Medical Record*, May 21, 1887.

† *Journal of the American Medical Association*, 1888 page 501.

capacity of the chest tends to improve the curvature." It is manifest that these frames fulfil these requirements.

The third and last division of the subject to which I will ask your attention this evening is the use of curved traction in

LOCOMOTOR ATAXIA.

I have no need to refer to the present interest manifested by the profession in the success of the suspension treatment, first practiced and published by Motchoukowski, in Odessa, in 1883, and afterward brought into prominence by Charcot in Paris, in January of the present year. In this country, Morton, Dana, and others have recently established valuable contributions to this subject, and a review of the cases so far collected from various sources which have been treated by this method shows a preponderance of favorable results. The treatment as outlined by these writers is simple and easily followed. It consists in suspending the patient for a period ranging from two to ten minutes once a day, or once every second or third day.

The precise effect of suspension upon the spinal cord and nerves in this disease is not as yet determined.

*Dana** considers that "it gives a slight stretching to the nerves and an impulse to a better circulation in the cord." He also considers it "a method of treatment inferior to others in our possession."

Waitzfelder† considers "it hardly reasonable to suppose that the cord itself was stretched, for it floats so freely in the spinal canal that the counter extension of the weight of the body is not sufficient to produce that result without the greatest pain." He considers "it more likely that the traction exerted on the spinal nerves in some way brings about a change in the circulation and nutrition of the cord, and the amelioration of the symptoms is due to a lessening of the vascular supply of the cord and its membranes.

Morton‡ in his report on this subject asks the following pertinent questions: "What are the effects of suspension upon the healthy spinal cord? What the cause of the effect upon the diseased cord? Is it due to a diminution of the irritability of the cord by stretching it, and temporary; or by reason of frequent and forced reduction of abnormal irritability likely to become permanent? Whether the cord can or cannot be actually elongated? What results may be obtained in other diseases, and whether a restoration of function may not influence the condition of a lesion?"

In conclusion, he considers "the subject is but just entering upon its experimental and clinical stage, bnt if we accept the facts thus far reported, and if they prove to be repeated in a large number of cases, we shall be obliged to admit that the sum total of improvement and cure, be it temporary or permanent, is far in access of that attainable by any previous means, and as such must be regarded as the most signal advance yet made in the treatment of this hitherto intractable disease."

Motchoukowski§ is inclined to believe the improvement noticed in his cases to be due to the greater activity of the circulation induced during suspension.

He noted increased arterial tension and increased rapidity of the pulse and respiration during the suspension of living persons, and in experiments upon a cadaver he found a lengthening of the spine between the second cervical and fourth lumbar vertebræ of $2\frac{1}{4}$ ctm.

The writer of an able editorial upon the subject, published in the *Journal of the American Medical Association*,‖ September 7th 1889, states that "although the status of any therapeutic measure in a disease of so protracted and irregular course can only be determined after much more prolonged observation than has been had in most of the cases thus far treated, the reported results have been temporarily at least, so generally favorable, and the difficulty and risk of the treatment, under proper precautions, are so slight that it would seem worthy of a general trial."

He further states that "the rationale of the treatment is not very evident. Experiments have shown that in the cadaver, at least, the vertebral canal is sufficiently elongated to exert slight traction upon the spinal cord by the nerve roots: but why this should be beneficial is not quite clear. Althaus suggests that it may be due to the break-

* *The Medical Record*, April 13, 1889, page 420.
† *The Medical Record*, June 8, 1889, page 630.
‡ *The Medical Record*, April 13, 1889, page 406.

§ Vratsch, No. 17 to 21, 1883.
‖ Page 343.

ing up of adhesions in the meninges and neuroglia." For the present he considers the method must be considered empirical rather than scientific.

He also draws attention to the fact that two persons who have attempted to conduct the treatment on their own persons have died from asphyxia, and that death has occurred apparently as the result of suspension in two other cases where it was practiced without medical supervision.

He deems it "advisable that when undertaken it should be conducted by the physician and begun with caution. Pulmonary, cardiac and vascular disease, great debility and anæmia are held to be contra-indications."

In conclusion he states that "even if only temporary comfort can be given to any large proportion of the sufferers from this disease, it will be a great boon to both physician and patient, and so far mitigate what has been one of the opprobia of medicine."

FIG. 6.—Upright Spinal Extension Frame.
(Anterior curved position.)

To still further contribute to the successful treatment of locomotor ataxia, I wish to advocate the use of the curved board, combined with traction, and I contend that if suspension in a direct line, according to the Sayre method advocated by Charcot and Motchoukowski, exerts an appreciable influence in either elongating the spinal cord or stretching the spinal nerves, traction exerted upon the spine while it is curved *anteriorly*, with the patient resting comfortably during the process, will produce much more marked result. We have already described the ligamenta subflava in a preceding portion of this paper, and it is now incumbent upon us to study their relations to this procedure.

The proximity to the spinal cord of this very elastic ligamentous structure should be borne closely in mind, for if any actual elongation of the cord or the spinal nerves does take place during traction, it must be due to the stretchable quality of these ligaments, which lie so close to the spinal canal.

I contend that the cord will be more elongated by traction in the anterior curved (see Fig. 6), than in either the posterior curved or vertical positions of the spine, and in support of my position a glance at the vertebral column in its entirety and in its relation to the spinal cord is necessary

The spinal *cord* is the cylindrical elongated part of the cerebro-spinal axis contained in the spinal canal.

It does not completely fill this canal, its investing membranes being separated from the surrounding walls by areolar tissue and a plexus of veins, and it occupies in the adult only the upper two-thirds, of the canal extending from the foramen magnum to the lower border of the first lumbar vertebra where it terminates in a slender filament of gray substance which is continued for some distance into the filum terminable.

The spinal canal is posterior to the main portion (*i. e.*, the bodies and their intervertebral cartilages) of the vertebral column, and this is an anatomical feature to be emphasized, because on account of this arrangement, it is plain that a given amount of traction exerted on the column in an anterior curved position (this anterior curving or "flexion" of the spine being the most extensive of any of its movements, and freely permitted in the cervical and lumbar regions) must result in greater elongation of the cord itself, situated behind the vertebral bodies, and an equal amount of traction exerted with the column in any other position.

We will now place a patient face downward (Fig. 7) upon this recumbent traction frame in which the curve of the board is made to correspond as nearly as possible to the normal curve of the spine in the dorsal region. Owing to the flexibility of the cervical and lumbar region just referred to, the cervical and lumbar vertebræ assume

the same arc as the dorsal, and we have the entire vertebral column describing one curve. Next secure the patient's feet to the foot-board and apply traction to the spine by means of weight at the head. It will be seen by the measure which has been laid out in inches upon the board, that by the traction the body has been elongated several inches. Some of this is attributable to the stretching of the lower extremities, but a portion of it has been accomplished in the vertebral column itself. If the screw is now gradually turned so as to increase the the curve of the board, we find that the distances between the spinous processes become increased in proportion as the arc is increased by the screw; and since the centre of the arc of this stretched spine is anterior to the column, it follows that there is more traction exerted upon the spinal canal and its contents, than upon the anterior portion of the column.

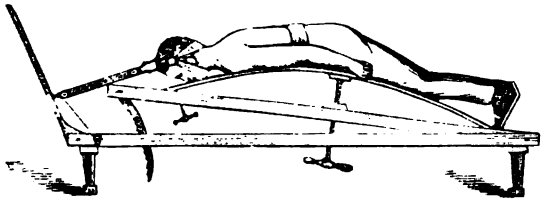

FIG. 7.—Recumbent Spinal Extension Frame. (Anterior curved position.)

In Sayre's suspension, as advocated by Charcot, we depend for extension of the spine upon the stretchable qualities of the tissues other than osseous, and white fibrous, of which the spinal column is composed, while in the method I advocate to-night we have in addition to the increased anatomical advantage of the anterior curved position itself, a more accurate method of graduating the traction, and the great advantage of applying the traction while the patient is in a position of comfort, and not one of torture or danger.

The question of *rest* during traction has never been broached by advocates of Sayre's suspension, because it is an impossibility during that process. On the other hand, during traction upon the curved board it is not only possible, but is an advantageous feature of the treatment.

The importance of *rest* in the treatment of this disease has been advocated by Prof. D. R. Brower, of Chicago, in a clinical lecture* published last year. He states that, "in the early history of these cases, before the ataxia is manifest, when you can recognize by certain symptoms the beginning of the disease, when in other words, you have an impairment of the reflexes, disturbance of color sense, diæsthesias throughout the body, impairment of tactile and pain sense, mental depression and irritability of disposition and severe localized pain, you may do something for your patient, and sometimes cure him. If you treat the disease vigorously in the pre-ataxic stage, you can every now and then arrest it. You do this by putting the spinal cord as nearly as possible in a state of absolute rest.

"Put your patient to bed and keep him in a horizontal position. By judicious massage and Faradic exercise of the muscles prevent the possibility of their wasting; and give him at the same time such internal treatment as is indicated and in accordance with the etiology of the case."

Rest in the incumbent position, so strongly recommended in the paragraph just quoted, is perfectly feasible upon the recumbent frame, in addition to the traction which can also be applied at the same time and without impairing the patient's comfort.

In conclusion: I would advocate in the treatment of "Locomotor Ataxia," in addition to the constitutional treatment:

1. The use of both the erect and recumbent curved traction frames as being superior both in principal and practice to the Sayre suspension apparatus employed by Motschoukowski and Charcot.

2. The use of traction while the spine is curved *anteriorly*, to produce the greatest possible degree of elongation of the cord and spinal nerves consistent with a requisite amount of rest, comfort and freedom from danger.

3. The use of traction while the spine is curved *posteriorly*, to increase the vital power.

4. The use of appropriate gymnastic exercises during the curved traction to restore impaired muscular function and improve general nutrition.

5. The use of appropriate forms of electricity* while the traction and the rest are being practiced.

Medical and Surgical Reporter, Philadelphia, April 28, 1888.

*On the subject of electricity in the treatment of this disease, Stembo (*Berliner Klinisch Wochenschrift*, Oct. 29, 1888), states that "although so much is written concerning tabes, yet but little appears as to its treatment."

He considers "electricity to be by all means the best treatment for tabes, and that the constant current had been the one chiefly employed in Germany, England and Russia, while the interrupted current is used in France and also in America."

Reports of Societies.

HAMILTON MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, May 26th, 1890.

Dr. Gaviller in the chair.

Dr A. B. Osborne read a paper entitled "Spectacles as therapeutic agents."

If "the proof of the pudding is in the eating," then the value of any therapeutic measure consists in its successful application. The results—remote and direct—of strain upon certain portions of the ocular mechanism are being rapidly ascertained and are becoming recognized by the profession. So far-reaching are the effects of ocular strain that an examination of the eye is considered incomplete unless the state of the refraction and motor apparatus is fully noted, and many chronic inflammatory affections of the eyes become more amenable to treatment when the ciliary strain is removed by glasses. The constant occurrence of certain symptoms in cases of hypermetropia and astigmatism as well as the equally constant relief to these symptoms afforded by wearing glasses, point at once to a strain of the ciliary muscle as the prime factor in their production.

Headache is one of the commonest manifestations of ciliary strain, in fact refractive errors are so productive of this disorder that every case of chronic or recurring headache should be tested for glasses. The headache may occur in almost any form, but is most frequently frontal, accompanied by a sensation of weariness and a desire to close the eyes. It is rarely present upon first awakening in the morning, but commences during the day, or in the evening after the eyes have been in use for some time. Among school children who are compelled to study at night these headaches are especially frequent; a good night's rest usually removes the trouble completely, but only to return at the end of another day's work. The sufferer may be quite unaware of any defect of the eyes, as there are frequently no symptoms pointing directly to them, and the vision may be excellent, in fact it is the proud boast of many such cases that their sight is perfect, yet a careful examination reveals an amount of hypermetropia which when corrected affords a measure of perfect relief. It is not infrequent to be consulted by patients about headaches which are referred to a slight or purely imaginary catarrh, but are in reality due to the eyes, and are cured by wearing appropriate glasses. The causal relation between ciliary strain and headache is proved by the disappearance of the latter when the former is relieved, but the direct chain by which such an effect is produced is difficult to trace.

Neuralgia, especially of the frontal nerve. but also of the facial and occipital nerves is not unusually the result of occular strain; indeed such association is sufficiently frequent to call for an examination of the eyes in obstinate and recurring cases. This form of neuralgia is particularly prone to occur when the patient is somewhat run down owing to the fact that the eyes are required to do their customary work notwithstanding the fact that they are in the same weakened condition as the rest of the system. In these reflex neuroses which are influenced if not actually caused by strain of the ocular mechanism, the neurotic condition, unless early relieved, may become a confirmed habit, making it much more difficult to eradicate. This is one of the strongest arguments in favor of an early optical correction. It is hardly necessary to remark that the symptoms so far enumerated are most apt to occur when the system is debilitated, so that invigorating treatment is indicated as well as relief to the ocular strain.

The local effects of ciliary strain are numerous; fully two-thirds of an oculist's cases presenting themselves on account of, or as a result of such strain.

The causation of cataract is probably one of the most direct results of ciliary strains. It has long been known that the majority of cases of cataract were hypermetropic, but it has been reserved for recent observers to begin at the other end of the scale and demonstrate incipient cataracts in a large proportion of cases of hypermetropia and astigmatism. The probabilities have long been in favor of such a theory, and recent observations appear to have established it as a fact.

A large percentage of squints are the outcome of ciliary strain, and many oculists can cite cases where, having seen the patient before the squint had become a confirmed habit, it disappeared completely under the use of atropine and correcting glasses. Similarly a simple surgical correction without the assistance of spectacles is too frequently a complete failure. So well known has this fact become that surgeons do not operate upon squints without first testing the vision and ordering the requisite glasses.

Chronic affections of the lids as blepharitis and recurring styes may be kept up by ciliary strain; these cases recover rapidly when glasses are worn. This is also true of a chronic form of conjunctivitis affecting principally the palpebral conjunctiva. The writer has found a considerable proportion of his cases of chalazion associated with hypermetro-

pia and astigmatism, and the correction of these defects has materially lessened the irritation. Photophobia, lachrymation, and an apparent hyperaesthesia of the retina may all be produced by strain of the refractive mechanism.

The hypertrophy of the ciliary muscle resulting from the continuous strain necessary in hypermetropia and astigmatism is an important factor in the production of glaucoma.

Lastly the asthenopia produced by some forms of ocular strain is familiar to all; it disappears rapidly after the proper glasses are worn.

The large number of children wearing spectacles in the present day is frequently adduced as evidence of the deterioration of the species. It would be more correct to call this an index of the advance of science, inasmuch as we are now able to relieve diseases by means of glasses which our predecessors were barely able to diagnose, much less treat. From what has been said it will be seen that spectacles occupy a prominent place among our therapeutic agents, not only in relieving visual defects and in the treatment of some painful reflex symptoms, but also in diminishing the danger to eyes later in life from such serious diseases as cataract and glaucoma.

Dr. Lafferty read notes of following case :—

J .M., a laboror, aged 51, married; has served in the British army for 11 years. Has, with the exception of smallpox 32 years ago, had no sickness of any kind. Drank very hard until about 12 years ago. During this latter period he has been a total abstainer. Family history good ; parents both lived to 80.

Never contracted any venereal disease ; in fact never required any medical attention until about four years ago, when he experienced difficulty in micturating. The urine contained considerable quantity of white substance, milky in appearance. Had retention, was delivered by means of a catheter. This deposit has gradually increased in quantity ever since, being almost constantly present. About this time pains began to be felt in the sacral and gluteal regions, darting and shooting down both legs to the heels. Little notice was taken of it, was considered to be sciatica until in May, 1887 (3 years ago) there was a decided weakness in his lower extremities. The pain was more frequent and seyere, and shortly after, while walking with a friend at night, he fell down on the sidewalk and had to be assisted home by his companion. In August of this same year (1887) I was summoned to attend him ; found the patient in bed, complaining of pain in both limbs, especially in the calves. While lying on his back with his legs crossed, when endeavouring to change their position by lifting the top one, there would be a disposition for the lower one to move first. Has considerable difficulty in walking, in the dark stumbles from side to side. If walking during the day, cannot look back without first stopping, that is, he cannot look back over his shoulder and still keep moving forward. His tendency under these circumstances is to fall. Eyesight good ; pupils equal, no arcus senilis ; conjunctiva normal. No evidence of paralysis ; has good power of muscles. Can stand steadily when eyes are open, but when asked to close them begins to sway back and forward and is quite unsteady. With eyes closed can place right index finger on tip of nose without any hesitation. The left is slower in movement, and does not find the nose so conveniently. Walks with a staggering gait, bringing the heel down with the toes. Diminished sensation in both extremities.

Tendon reflex, nil ; bowels very constipated; appetite diminished and variable.

Describes a feeling of numbness most noticeable in right leg and foot, a sense of constriction about the body as if a rope was tied around him above the hips.

Urine somewhat increased in quantity very slight trace of albumen, no sugar, sp. gr. 1022, turbid and alkaline. After micturating a slight creamy deposit was frequently passed. Sexual powers normal. Pulse 65, weighs 160 bls.

Diagnosis—Tabes dorsalis non-syphilitic. Ordered rest in bed, liberal dose of castor oil as bowels had not been moved for 4 days. Fl. ex. calabar bean ♏ 2 four times a day.

Aug. 21st. Bowels moved thoroughly, feels much more comfortable.

Sept. 2nd. Allowed up. Pains slight, appetite good ; sleeps well. Takes pulv. glycyrrhizæ co. every alternate day.

Oct. 15. Retention relieved by a catheter. Complains of a fatigued feeling generally, marked numbness in both legs. Pain increased. Has to use a cane to steady himself when walking at night. Ordered pil argentum nitrate ¼ gr. three times a day, in addition to previous prescription.

Nov. 20th. No improvement. Thinking that owing to his military career and previous intemperate habits there might possibly be a specific cause, pot. iodide was given (in gradually increased doses). This drug produced gastric disturbance and was intolerable at times, hence discontinued it after a trial of a few weeks and substituted fl. ex. calabar bean ♏ 2, with 4 minims of ac. phosph. dil. t. i. d.

Aug. 30th, 1888. Galvanism has been systematically used for last two months. The pains are somewhat relieved by its use. Walks very slowly assisted by a cane, dare not venture out at night alone. Occasional doses of morphia have to be administered to relieve pain. Greater loss of sensation in lower extremities ; numbness extends higher up to the waist. Complains of tightness from the ribs down. Slight numbness in right arm. Sensation in soles of feet when walking, as though stepping on a spongy material. On pinch-

ing the neck, the pupils do not respond by dilating, as is seen in normal subjects. Power of co-ordination much lessened; in fact the conditions present a year ago are now greatly exaggerated. Prescribed spr. trip. phos. ℥j. t. i. d.

May, 1889. Is so much disabled as to be unable to get out. Goes around the house with a crutch under each arm. Pains in the lumbar region and down both legs very troublesome. Says stiffness and tightness have become worse. Sensation leaving right arm and shoulder. Can remove the hair from his arm without feeling it. Left arm normal. Is now given Sayre's apparatus, which is attached to the ceiling. By means of this, he is to be raised off his feet once a day, and allowed to hang five minutes each time. When raised, he described the sensation as if being pulled apart. Could feel the spine, as it were, separating. Found almost immediate benefit, pain and stiffness being relieved. Bowels began to move without purgatives, and four weeks after, walked from the street car into my office, the only assistant being a heavy cane.

Aug. Went to Toronto on a visit for a month, using Sayre's apparatus continually, taking syr. trip. phos. and still improving.

Dec. The pain, stiffness, etc., has again returned, although he has persevered with the treatment recommended. Is forced to use the crutches once more. Has lost all sexual desire and power. Urine is now clear and normal. Muscles do not respond to a very strong faradic current. Sensation in legs almost entirely gone. Can strike them with a heavy stick without feeling it, and as he puts it, "they are just like a board." Loss of sensation extends over upper right half of the body, limited by clavicle and scapula above and the median line before and behind.

April, 1890. General condition much the same as in December last. Sayre's apparatus is of no benefit to him now, further than some temporary relief for an hour or so. Has taken nothing in the way of drugs for the last three months, except an occasional half grain of morphia as may be found necessary.

Selected Articles.

HYPNOTISM AT HOME AND ABROAD.

BY A. T. MYERS, M.D., M. R. C. P., LONDON, ENG.

During the last ten years so remarkable a change in most of the European countries has taken place as to the position of hypnotism, and its relation to practical medicine and therapeutics, that it is worth while to give some attention to the conditions of the change, and to compare its effects in England and the Continent. Ten years ago, in the practical medical world of England, hypnotism was certainly little known and little valued. It was remembered by the more historically minded that the term had been put forward by an English surgoon, James Braid, in 1843; that the phenomena which he had described by it were not in any way shown at the time to be due to fraud; and that the physiological explanation which he had propounded was at least novel, and in fact the only physiological explanation worthy of serious consideration. The name of James Esdaile, a Scotch surgeon in one of the highest posts in India, was more generally forgotten, though intimately associated with practical issues, inasmuch as he had proved by a long series of 261 surgical operations, some of them as serious as lithotomy and amputation above the knee, extending over six years (1845-1851), and attested by a Government Commission, that complete anæsthesia might be produced by hypnotism, so that the patients had been perfectly unconscious of operations which, as they were performed before the use of chloroform or ether, it was known would have been the occassion of the most acute pain. When chloroform was introduced in 1846, it was eagerly resorted to in India as everywhere else, and the puzzle of Esdaile's anæsthesia by hypnotism was willingly forgotten; for most of the surgeons who had had any practical acquaintance with it had been surprised to find that it was not due to quackery, but involved a problem which it was not easy to solve.

The interest in the matter was never allowed to be orthodox in England and, after the slight stimulus of Braid's work, soon flagged. The public displays of platform marvels under the name of mesmerism, which could never be satisfactorily proved free from some admixture of conspiracy, conjuring, or fraud, induced a contempt for such things, and all things like them in name and nature, that was perhaps more keen than judicial.

A few careful observers, however, especially in France, carried on the traditions which had originated when de Puysegur, who had done as much as or more than Anton Mesmer in starting the movement; and after him Dupotet, Petetin, and others in the early years of the century, were bringing the hypnotic condition daily before the public observation. They had not got to make the facts fit in exactly with any physiological theory, but they had convinced themselves by practice that there was more in hypnotism than they could understand or explain, and continued their patient labours in educing its practical applications to mankind. Liébeault, of Nancy, published in 1866 a very noteworthy book which contains the results of years of quiet practice as

well as reflection. He had carried out in a large provincial practice in Nancy the custom of trying to hypnotise almost every case among the poorer classes that came to him, and though he did not neglect medicines in some appropriate and serious cases, yet he had arrived after many thousands of trials at the conclusion that a great many of the small bodily inconveniences of life, which may take up so large a proportion of the doctor's time, could be relieved more readily by hypnotism, suggestion, and encouragement, than by any other means in his power. And long experience had shown him that the hypnotic state was not confined to those of a hysterical or at least nervous temperament, but could be induced in a large majority of his somewhat uneducated patients. The medical school of Nancy, which was one of considerable learning, and included some eminent teachers, such as Professor Beaunis, paid at first little or no attention to this.

Meanwhile there had been some remarkable observations by Azam, following up by hypnotism the clue that he had obtained, and whose importance he had appreciated, in the case of the double personality of Felida X—. A few years later M. Charles Richet published a very thorough and well-reasoned essay which was much discussed. Finally Burq, a somewhat inaccurate theorist, urged on the medical world his method of metallotherapy, which embodied the belief in a special relationship in healing power between particular individuals and particular metals. There was at least enough truth in some clinical facts he had to show, whatever might be their true interpretation, to induce critical examination of them. Metals were applied externally with an expressed view to certain results, and some of the desired results followed. But after a little examination and trial of other substances than the particular metals originally used, is was generally considered that the results were due not to the metal but to the ceremony, the interest, and above all to the expectation. It was explicable in fact as in great part due to the results of expectant attention, and conscious or unconscious suggestion. It was possible enough that there may have been a few cases of fraud intermixed, for the limits of fraud, conspiracy, and mental disease in some hysterical subjects are extremely hard to define. But what it showed or helped to show to the keen eyes of some of the best observers, such as Charcot, was that there were influences more subtle than those which had been generally acknowledged that did affect the human body, and affect it not a little, and in 1878 Charcot began in serious earnest his enquiries into them. He took the material which was at any rate the most ready to his hand, which happened to be the hysterical division of the out-patients of the Salpêtrière and its hystero-epileptic wards, which were his own creation. This may reasonably be regarded as in some respects unfortunate, for it led to a somewhat incomplete view of the whole position, a view in fact based almost entirely upon only such data as the hysterical or semi-hysterical classes could furnish. This tended to establish, by the minuteness and care of the observations, the elaboration of the physiological labatory, and the weight of Charcot's authority given to the first *magnum opus* of the modern school upon the subject, the almost world-wide impression that hypnotism could only affect hysterics; and might perhaps best be reckoned as one of the fanciful conceits of that Protean malady, which the ordinary practitioner need not closely consider. This impression, with wider experience, is slowly dying away. There were studies in the phenomena of conspicuously morbid subjects carried out by elaborate experiment which yielded abundant material for some generalisation; but did not always contain, as was only too probable in such a new field of observation, some of the safe-guards against a different intrepretation of the phenomenon to that which was adopted, and furthermore they had little to do immediately with therapeutics. I do not remember, since I first saw hypnotism practised at the Salpêtrèire in 1881, that I have witnessed more than a very small minority of the cases where it was used by Charcot with a purely therapeutical object.

Whilst the Salpêtrière school was maturing itself, the stimulus which had been given, partly by that and partly by some German physiologists and physicians, made many men look about them and pay more attention to what was going on under their own eyes. The Nancy physicians asked what their fellow townsman Liébeault had really been saying and doing. They looked not only at the cases which he had related without much technical detail in his book, but also at the grateful *bourgeoisie* who thronged his house from 7 a m. onwards through the morning and midday hours. When they complained, as for the most part they did, of this or that pain or ache or slight discomfort, they got in return, if the illness were not very serious, a little rubbing and stroking, and a few low toned words of suggestion that they would go to sleep, soon and quietly, which almost always produced a short sleep that looked complete comfort, and was certainly complete forgetfulness; and after a suggestion that they would awake without pain or discomfort, they awoke with encouragement and refreshment, as a rule with the pain gone, and with no memory of what suggestion had been given them. After a while the professors tried it for themselves in their excellent hospital of more than three hundred beds. With Bernheim at the head of their *Clinique*, Beaunis in their physiological laboratory, and

Liégeois to study the legal aspects of many new problems, they set to work in 1882 to see what practical experience would bring forth. On every case that came under Bernheim's treatment an attempt at hypnotism was made, and in the first four years a total of nearly 5,000 cases could be recorded, in which there had been more or less complete hypnotisation in 75 per cent. Since then the number has increased to more than 10,000 and the percentage of hypnotisable cases has risen to a little less than 85 per cent. And what has been gained or lost besides the advancement of knowledge by this great experiment? Nothing has been lost; there has not been aggravation of delirium, or over-excitement of the sensitive subject, or what has sometimes been described as the degrading servility of one human being to another; and the gain on the other hand has been, at the very least, the saving of pain to an extent hard to calculate but obvious enough to any by-stander, the bestowal of refreshing sleep on many that wanted it, and the giving over and over again of that *nescio quid* of stimulus and encouragement that overpowers the inertia and depression of many morbid states. I spent in 1885 several long mornings with Bernheim in the wards seeing some sights strange to English eyes. Many well-known types of disease were there; the chronic cardiac, the chronic renal patient in all stages of their diseases, the chronic child, the stooping old man with paralysis agitans; each could be benefitted at least for the time, the cardiac and renal sufferers by some hours of sleep and subsequent refreshment, for which they certainly seemed unmixedly grateful; the chronic child by hypnotic somnambulism induced in less than a minute, during which she could write her name intelligibly and had quite ceased her twitchings, and after which she was able to obey her post-hyponotic suggestions, and to keep quiet for rather longer than the day before; and the old man who was made able by vigorous suggestion without a sleep to hold himself still and straight for a while. It was a familiar sight to see a middle-aged man carried in a chair into the ward by two porters, say a corpulent butcher, with deeply flushed face, quick labored breathing, and a look of delirium that was very suggestive of pneumonia, and to find one's suspicions confirmed in a minute or two by a history of sudden illness for three days, sleeplessness, high fever, delirium, and the physical signs of consolidation of the bases of the lungs; but it was unfamiliar then to see the physician at once treat such a case by a peremptory order to sleep, which was met at first by an angry refusal, but as the order became more imperative there was no reply; and in less than five minutes the patient was asleep and slept for five hours, his respiration slackening from 58 to 34, and he awoke free from delirium, and in comparative comfort. There was no claim of direct tissue change in these various cases, but only of assisting Nature in her restorative processes by rest, sleep, and suggestion; and further, in many other cases, of long periods of complete relief of pain, rheumatic and neuralgic, from rheumatoid arthritis to sciatica of an obstinate type.

From this centre of new practice much has been directly diffused through Europe; many pupils and visitors have carried out their intention to go and do likewise. Florel, of Zurich, with a most important lunatic asylum at his disposal, after some weeks of observation at Nancy, found himself able to hypnotise fourteen out of the first thirty-three of his lunatic patients on whom he made the attempt, though the insane are in every one's opinion the most difficult class of all to hypnotise. The gain has been very great, in his experience, to the chronic drunkards, and the morphinists, and other classes of vicious habits; and though he does not speak with any of the easy optimism of scanty experience, he is very certain that some of the more serious cases that have had no relapses for two years have owed their recovery to their hypnotism. The induction of hypnotism he has found easy, in his last 105 trials having had 94 successes. Baierlacher, too, in Nuremberg has found it easy and useful, succeeding in hypnotising 121 out of 146. In Amsterdam two pupils of the some teacher at Nancy, van Eeden and van Renterghem, have worked vigorously, and have published since their first visit to Nancy in 1887 a list of 414 cases of very various nature, of whom they find only fifteen entirely unaffected by hypnotism, and 182 susceptible of its deepest stages; of the total they claim notable benefit or cure in 198.

In Paris, at various other hospitals besides the Salpêtrière, the treatment is adopted for many other maladies than hysteria and insanity; at the Hôtel Dieu (Dumontpallier and Mesnet), at the Bicêtre (Déjérine), at the Asile St. Anne (Magnan); and at many other medical schools in the French provinces, under the sanction and supervision of the professors and physicians; at Bordeaux under Pitres, at Montpellier under Grasset, at Toulon under Fontan and Ségard, and at the naval school at Rochefort under Bourru and Burot; in Belgium under Masoir at Louvain; in Switzerland at Geneva under Yung, as well as at Zurich under Forel.

In Sweden and Denmark much hypnotism has been successfully practised by Wetterstrand, Hytten, Lytken, and others in good position, and it has been favorably received. Wetterstrand in 1887 found 718 out of 738 hypnotisable for various objects; and Lytken reports twenty cases of stammering as cured by it.

In Germany the physiologists have found some real interest in the hypnotic states, which even as

late as 1880 such a distinguished professor as Rudolph Heidenhain plainly confesses he had up to that time thought to be "nonsense;" but he quite changed his opinion after seeing some experiments with Hansen, a non-professional man who had had long experience in hypnotism, and who found no difficulty in hypnotising three out of a party of ten healthy doctors. Senator of Berlin went to the same meeting as a sceptic, but after his return thought hypnotism was a region of rich promise; and since then there has been a steadily increasing amount of trial in clinical medicine, with results that have been considered valuable by many good physicians, such as Mendel of Berlin, Nussbaum of Breslau, Binswanger, Nonne and von Schrenck-Notzing. From Berlin comes the most complete bibliography, and also the most weighty text-book, of which I am glad to say an English translation will soon be ready.

In Italy the physiological study has been very readily taken up by Tamburini and Seppilli, and the clinical practice by Vizioli, d'Abundo, and many others.

It may be just worth while, in this connexion glancing at a rough method of estimating the interest in hypnotism which is felt in different countries, namely, by comparing the number of books and articles touching on the matter and its therapeutical applications which are published in the medical papers, reports, transactions, etc., as far as can be computed from a careful perusal of that most invaluable hand-book the *Index Medicus*. If we look through the year 1888, for example, the last year of which the records in the *Index Medicus* are as yet quite complete, we find the number of books and articles there noticed, from the 6,000 or 7,000 periodicals they take in, to be for—

France 61,	Spain 6,
Germany 35,	Other European countries 15,
Italy 22,	
England 7,	United States 16.

This suffices to indicate that there is at any rate a comparative reticence, if not indifference, in England. A few of the articles published in the United States are translations from European sources.

The past year of congresses in Paris was to some extent a critical one for the status of hypnotism, and has proved remarkably favorable. Two congresses were held which dealt with it. At one, the *Premier Congres International de l'Hypnotisme*, under Dumontpallier as President, those who had professional medical knowledge were brought together, and gained much from making each others acquaintance. Their papers and debates, now published in detail, constitute a considerable mass of testimony to the clinical usefulness of hypnotism. The French, naturally enough, formed a large majority in a meeting of about 150, but all the other European countries were represented by several professional men. I was not aware that more than two English were ever present. At the other congress, the *Congrès de Psychologie Physiologique*—or of Experimental Psychology, as it may be called—there was a larger gathering, containing as many who are eminent in psychology and physiology as in medicine. There was consideration of some very difficult matters, and among them hypnotism; on which there was a four days' discussion, but from the point of view of the psychologist rather than the physician; and though the keen interest of many members, on all sides of the subject, was remarkable, yet therapeutics did not come within the set bounds of the debate.

I have tried to show from various sources what to any one who may look at this paper will probably be no novelty, namely that in the medical world outside England there has been a considerable movement in medicine in which the English doctors have taken very little part; and I should wish to suggest that there is gradually accumulating considerable *prima facie* evidence that there is some value in the movement. This may be drawn from the width and rapidity of its spread, and its increasing practical application to therapeutics, as well as from some fundamental problems it raises in physiology and psychology, and the well-known eminence of many of its advocates in other difficult clinical matters. This evidence, too, which was in great part unappreciated ten or twelve years ago, has been much strengthened by the course of experience, not only among the French and Italians, whose impressionable temperament makes some prudent English observers shrink from drawing their guiding examples from them, but also among the Germans, Danes, Dutch, Swedes and Swiss, whose constitution is much more like our own in its nervous susceptibility. If this is so, it would be much to be regretted that England, which holds and has long held such a very high rank in the history of clinical medicine, should pass by a new field of enquiry and new possibilities of relief. One fact has often touched an irritable spot in those who have turned aside from any consideration of hypnotism, and that is that the accounts of it given by enthusiasts often seem to be, and sometimes are, inaccurate and exaggerated. The subject is at once dubbed nonsense and indignantly rejected. There is certainly nothing to excuse the inaccuracy, except the difficulty of describing and estimating something both novel and imperfectly understood. Few things do true knowledge more damage than the magnification of a genuine mole-hill into an imaginary mountain. But hypnotism needs no magnification to be proved genuine and a little more than a mole-hill.

I am not attempting to examine in detail the

various useful applications of hypnotism which are possible; they are very prudently summed up by Dr. Hale White in a recent hand-book of therapeutics, and some of them have been illustrated by the practice of Dr. Lloyd Tuckey. That further uses are impossible I should be sorry to assert. "*Celui qui, en dehors des sciences mathematiques pures, pronon e le mot impossible, manque de prudence,*" says Arago accurately enough. But I should not wish to press accuracy so far, or many useful medical maxims would suffer for it. I would merely make a humble request for attention to three points in the possibilities of hypnotism; (1) the giving of restful sleep; (2) the relief of some of the lesser pains and discomforts; and (3) what seems to be much the most important, namely, the results of post-hypnotic suggestion in changing the hopes and habits of the patient in regard to some points where the will has become too weak to assert itself. In cases of morphinomania we have good instances of cure (Bernheim, Burckhardt, Forel), and in that far commoner and more deadly perversion, dipsomania, in all its stages. It is no light satisfaction to see the confirmed chronic drunkard, as I have once seen him in England, expressing his deep gratitude to his hypnotiser for the continuance of that capacity of temperance which he gained to his surprise after the first or second sitting, when with no recollection of what had been suggested to him in the hypnotic sleep, he found the gin bottle so disgusting that he threw it out of the window, and would honestly have nothing more to do with it ever since. That seems to me a genuine advance in therapeutics, and one that England should be glad to learn, even though it is learnt at second-hand.

THE USE OF EUCALYPTUS OIL IN SCARLET FEVER.

At a meeting of the Epidemiological Society, held on March 12th, Mr. J. Brendon Curgenven read a paper on the use of the "Oil of Eucalyptus Globulus in Scarlet Fever and other infectious diseases." He spoke of the importance of the subject of disinfection in cases of scarlet fever and other infectious diseases, especially as within the last few years considerable sums of public money have been, and are being now spent, in erecting larger fever hospitals for these cases. The method of disinfection by inunction, which he had practised with success during the last twelve months, if generally adopted, would save the ratepayers this heavy burden, and allow of the cases being treated in their own homes, without risk to those around them.

The disinfectant which he used is eucalyptus oil with thymol and other camphors and aromatic antiseptics in solution in definite proportions, much stronger than has been found by experiment to be sufficient singly to destroy bacilli and bacteria. This combination is known as Tucker's Eucalyptus Disinfectant, and he considered much stronger; that for all infectious diseases no stronger or safer disinfectant could be used. He showed that from the experiments of Koch, Widal, Chauternisse and others, that these aromatic and camphoraceous disinfectants, when mixed with olive oil, fats, vaseline or alcohol, to the extent of five per cent., had no effect on bacilli or bacteria, and this applies to carbolic and other agents. The author stated, as his experience, that any of the above disinfectants dissolved in essential oil, retained their full powers, and as combination of these disinfectants forms a powerful solution as can be required for the destruction of any infectious poison.

Eucalyptus is a true disinfectant, as it has the power of destroying the active matter or the infective germs generated in and discharged by a person passing through any of the eruptive or infectious fevers, and which received by a healthy person into his system develops the same train of symptoms, the same fever from which the former was suffering. Eucalyptus destroys the malarial poisons which in the human system develop the various short or long malarial fevers, such as ague, jungle fever, Roman fever, rock fever, influenza, etc. Dr. Bucholtz found eucalyptus oil to be three times stronger than carbolic acid, for while the latter required a strength of 1 in 200 to prevent putrefaction, eucalyptus oil only required a strength of 1 to 666 to produce the same effect. Seigen found that blood to which 1/3 per cent., of the oil had been added was odourless at the end of ten days. Mr. Lasselles Scott says it is three and a-half times more powerful than carbolic acid as a bacterial antiseptic. Mr. Mayo Robson proved by experiments that the vapour of eucalyptus and cajeput oils given off at the ordinary temperature of the air, preserved sterilized hay infusion from the development of bacteria, and he says, "It may so saturate the air as to kill all infeetive particles, not only bacteria and micrococci, but also the germs of fevers and other infectious diseases."

The vapour of carbolic acid at ordinary temperatures Dr. Franklin Parsons, quoting Koch, says, had no destructive effect on spore-bearing bacilli, though some effect was produced at elevated temperatures. Since Dr. Budd recommended the inunction of olive oil in scarlet fever corporeal disinfection by inunction has been tried by medical men at various times, but all have failed in their purpose through the unsuitableness of the media in which they were applied. Fixed oils and fats became rancid from the heat of the body, and they interfered with the action of the skin. Water as a solvent was unsuitable for application to the whole

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Containing Pancreatine, Pepsin, Lactic and Muriatic Acids, Etc. The Combined Principles of Indigestion. To id in Digesting Animal and Vegetable Cooked Food, Fatty and Amylaceous Substances.

DOSE:—3iv, containing 5 grs. Pepsin, after each meal, with an Aperient Pill taken occasionally.

This preparation contains in an agreeable form the natural and assimilative principles of the digestive fluid of the stomach, comprising **Pancreatine, Pepsin, Lactic and Muriatic Acids.** The best means of re-establishing digestion in enfeebled stomachs, where the power to assimilate and digest food is impaired, is to administer principles capable of commnnicating the elements necessary to convert food into nutriment.

The value of **Liquor Pancreopepsine** in this connection has been fully established, and we can recommend it with confidence to the profession as superior to pepsin alone. It aids in digesting animal and vegetable cooked food, fatty and amylaceous substances, and may be employed in all cases where from prolonged sickness or other causes, the alimentary processes are not in their normal condition.

ELIXIR SALICYLIC ACID COMP.

(WM. R. WARNER & CO.)

A Potent and Reliable Remedy in Rheumatism, Gout, Lumbago, and Kindred Diseases.

This preparation combines in a pleasant and agreeable form:—Salicylic Acid, Cimicifugæ, Celseminum, Sodii Bi-Carb., and Potass, Iodid., so combined as to be more prompt and effective in the treatment of this class of diseases than either of the ingredients when administered alone.

This remedy can be given without producing any of the unpleasant results which so often follow the giving of Salicylic Acid and Salicylate of Sodium, viz.: gastric and intestinal irritation, nausea, delirium, deafness, nervous irritability, restlessness, and rapid respiration; on the contrary, it gives prompt relief from pain, and quiets the nerves without the aid of opiates.

Elixir Salicylic Acid Comp. has been extensivelyu sed in private practice for several years with almost unvarying success and with better results than any other mode of treatment yet suggested.

It is a matter of great satisfaction to us to be able to place before the medical profession a remedy so effectual in the cure of one of the most stubborn classes of disease.

The dose is from a teaspoonful to a dessertspoonful, and increased as necessary to meet the requirements of the case Each teaspoonful contains five grains of Salicylic Acid.

Elixir Salicylic Acid Comp. is put up in 12-oz. square bottles, and may be obtained from Druggists everywhere.

SYR. PHYTOLACCA COMP.

(WM. R. WARNER & CO.)

ALTERATIVE, RESOLVENT, APERIENT TONIC.

COMPOSITION:—Phytolacca Decandra, Stylingia Sylvatica, Lappa Major, Corydalis Formosa, āā grs. vi., Xanthoxylum Fraxineum, Potassii Iodidum, Cascara Sagrada, āā grs. ij., in each dessertspoonful.

Syr. Phytolacca Comp., the Composition of which has been given to the profession, has been known and used by Physicians, myself and others of my acquaintance, and found superior to other alterative compounds now in use. It has been used with great success in the treatment of Lupus, Herpes, Psoriasis, Acne, Glandular Enlargements, Strumous Affections, Granular Conjunctivitis, and Eczema. As a remedy for Syphilitic Diseases of the Skin and Mucous Membranes, it has proved to be especially valuable in my hands in a large number of cases where all the usual remedies had failed to improve their condition, and when Syr. Phytolacca Comp. was administered the improvement was very prompt and satisfactory.

It will be seen that Syr. Phytolacca Comp. contains the best alterative remedies now in use, and that they are so combined as to make permanent and agreeable preparation that can be administered to children or persons with the most delicate stomach.

I usually prescribe it in doses of a teaspoonful, which may be increased to a tablespoonful four times a day, the frequency of the dose to be diminished if bowels become too active.

CHARLES W. BROWN, M.D.

ELIXIR CASCARA SAGRADA

(WM. R. WARNER & CO.)

Used as a Remedy in Habitual Constipation, and as a Tonic in Stomachic Debility.

Med. Prop.—Mildly Laxative, Anti-Rheumatic. DOSE—3i to 3ij.

Each fluid oz contains 60 grs. Cascara Sagrada.

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PARVULES

The term Parvule, from *Parvum* (small), is applied to a new class of remedies (Warner & Co's) in the form of minute pills, containing minimum doses for frequent repetition in cases of children and adults. It is claimed by some practitioners that small doses, given at short intervals, exert a more salutary effect. Sydney Ringer, M.D., in his recent works on Therapeutics, sustains this theory in great variety of cases.

Parvules of Calomel, 1-20.

Med. prop.—Alterative, Purgative.

DOSE.—1 to 2 every hour. Two Parvules of Calomel, taken every hour until five or six doses are administered (which will comprise but half a grain), produce an activity of the liver which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

Parvules of Calomel and Ipecac. ℞ Calomel, 1-10 gr. Ipecac 1-10 gr.

Med. Prop.—Alterative, Purgative.

DOSE.—1 to 2 every hour. Two Parvules of Calomel and Ipecac, taken every hour until five or six doses are administered (which will comprise but a grain of Calomel), produce an activity of the liver, which will be followed by bilious dejections and beneficial effects, that twenty grains of Blue Mass or ten grains of Calomel rarely cause, and sickness of the stomach does not usually follow.

Parvules of Aloin, 1-10.

Med. Prop.—A most desirable Cathartic.

The most useful application of this Parvule is in periodic irregularities—Dysmenorrhœa and Amenorrhœa. They should be given in doses of one or two every evening at and about the expected time.

DOSE.—4 to 6 at once. This number of parvules, taken at any time, will be found to exert an easy, prompt, and ample Cathartic effect, unattended with nausea, and in all respects furnishing the most aperient and cathartic preparation in use. For habitual constipation, they replace when taken in single parvules the various medicated waters, avoiding the quantity required by the latter as a dose, which fills the stomach and deranges the digestive organs.

Parvules of Podophyllin, 1-40.

Med Prop.—Cathartic, Cholagogue.

Two Parvules of Podophyllin, administered three times a day will re-establish and regulate the peristaltic action and relieve habitual constipation, add tone to the liver, and invigorate the digestive functions.

Parvules of Arsenit: Potash, 1-100. (WARNER & CO.)

This Parvule will be of great use to physicians, as two Parvules represent the equivalent of one drop of **Fowler's Solution,** so that physicians can regulate the dose by giving one or two Parvules every hour.

Parvules of Corrosive Sublimate, 1-100. (WARNER & CO.)

Dr. Ringer, in his treatise, lays great stress upon the efficacy of minimum doses of corrosive sublimate in the treatment of Diarrhœa, whether the stools contain blood or not.

Parvules of Nux Vomica, 1-50. (WARNER & CO.)

Nux Vomica, according to Dr. Ringer, is possessed of real curative powers for sick headache, accompanied with acute gastic catarrh, whether due to error in diet, constipation, or no apparent cause. He regards it administred in small and frequently repeated doses, as useful in many disturbances of the gastric functions.

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Index of Diseases Treated with Parvules.

THE dose of any Parvule will vary from one to four, according to age or the frequency of administration. For instance, one Parvule every hour, two every two hours, or three every three hours and so on, for adults. For children, one three times a day is the minimum dose.

It is claimed by many practitioners that small doses, frequently repeated, exert a more salutary effect.

Atonic Dyspepsia.
Parv. Nux. Vomica.....1-50 gr.

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Parv. Calomel .....1-20 gr.

Bronchitis of Children.
Parv. Tartar Emetic.....1-100 gr.

Constipation.
Parv. Aloin .....1-10 gr.

Diarrhœa.
Parvules Corros. Sublimate .....1-100 gr.

Exanthematous Skin Diseases.
Parv. Iodide Arsenic.....1-100 gr.

Habitual Constipation.
Parv. Podophyllin.....1-40 gr.

Hydatic Uterine Growth.
Parv. Ergotine.....1-10 gr.

Incontinence of Urine.
Parv. Canthari .....1-50 gr.

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Parv. Aconite.....1-20 gr.

Influenzas.
Parv. Iod. Arsenic.....1-100 gr.

Itching Skin Eruptions.
Parv. Iod. Arsenic.....1-100 gr.

Mucous Rectal Discharges.
Parv. Tannin .....1-10 gr.

Nausea.
Parv. Ipecac.....1-50 gr.

Retarded Menstruation.
Parv. Ergotine.....1-10 gr.

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Parv. Calomel, 1-20, and Aloin .....1-10 gr.

Sick Headache.
Parv. Nux. Vom .....1-50 gr.

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Parv. Belladonna.....1-20 gr.

Sluggish Bowels.
Parv. Podophyllin.....1-40 gr

Spermatorrhœa.
Parv. Phosph .....1-200 gr

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Parv. Mercury with Chalk .....1-10 gr

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Parv. Calomel.....1-20 gr

Syphilitic Headache.
Parv. Cor. Subl .....1-100 gr

Torpidity of Liver.
Parv. Podophyllin.....1-40 gr

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Parv. Digitalis .....1-20 gr

A POWDER:—Prescribed in the same manner, doses, and combinations as Pepsin

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A SPECIFIC FOR VOMITING IN PREGNANCY.

In doses of 10 to 20 grains.

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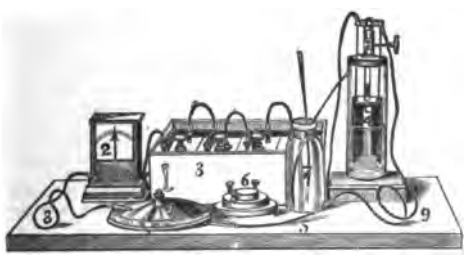

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Dr. A. M. ROSEBRUGH, of Toronto, may be consulted regarding Electrolytic and Electro-Therapeutic Apparatus.

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WYETH'S AROMATIC ELIXIR

OF

CASCARA SAGRADA.

The deserved popularity of this drug, together with the various methods adopted to render it palatable and less nauseous and bitter without injuring the therapeutical value, has induced Messrs. Wyeth to offer to the trade their "Aromatic Elixir," which embraces all the essential principles in an unchanged condition. Their direct source of supply is the California districts, where the bark is carefully gathered and thoroughly cured before shipping, insuring a better effect than is possible with much of the bark which is sold for manufacturing purposes; hence, we can unhesitatingly claim that we are offering the various preparations of this bark—viz., their Fluid Extract and Elixir—as possessing in the highest degree the full remedial attributes, which may be classified therapeutically as combining those of a carthartic and laxative with that of a valuable stomachic bitter. It is useful in cases of habitual constipation, relieving hemorrhoidal and other affections of the pelvic organs. It also improves the appetite, imparts tone to the digestive organs, and by increasing the secretions of the gastro-intestinal canal, forms a very valuable laxative, which effect seems to popularize the use of this drug.

Each teaspoonful of the Aromatic Elixir represents fifteen grains of the Cascara Bark.

SAMPLES.—To any Physician willing to pay the expressage (liquids cannot be mailed) we will send a four ounce bottle of this preparation without charge.

DAVIS & LAWRENCE CO., Limited,

General Agents, MONTREAL.

surface of the body in the first stage of scarlet or other fevers. A solution of corrosive sublimate of 4 to 1000 has been recommended for application to the whole surface of the body in scarlet fever, and to be repeated daily for weeks. It has also been recommended by a German physician as an application to the pustular eruption of small pox.

The author condemned the use of all poisonous disinfectants as they were a source of danger to the patient and to the inexperienced attendants, who, as numberless incidents have shown, often commit fatal mistakes. The eucalyptus disinfectant as above stated is far stronger than carbolic acid, and it is perfectly innocuous to the patient. It can be used freely without any inconvenience to the patient or the attendants.

The author had for some years studied the subject of disinfection by inunction but all the ordinary disinfectants were unsuitable either through being poisonous or requiring for their use a solution in water or oil.

He first used the eucalyptus disinfectant which is a solution in the essential oil of eucalyptus of thymol and other antiseptics, in a case of a child suffering from scarlet fever, one of a family of seven. It was a year and nine months old, the mother would not hear of its being sent to the hospital, and it was impossible to carry out any isolation in the usual way as she had to attend to all the wants of the other children. In this emergency he again thought of disinfecting the child by inunction. He directed the mother to rub the eucalyptus disinfectant over the whole surface of the body, night and morning, not omitting any portion of the skin, and to sprinkle the bed and the floor of the room with it, so that the air might smell strongly of the vapour. He also gave the eucalyptus oil in one drop doses every four hours in an emulsion. When the child was first seen it had the scarlet fever rash over the face, arms, and upper portion of the body. Its throat was so sore that it refused all food and had not taken anything for two days. It had not slept, was constantly crying, and very fretful. After the first inunction it slept for five hours, and on awaking drank some milk without pain. When seen in the morning it was eating bread and butter, the rash had gone, the temperature had diminished 2° and the child appeared quite well. The inunction with the disinfectant was continued for a week, night and morning for three days, and each night after a warm bath for four. The child was so saturated with the eucalyptus by inunction, by inhalation of its volatile vapour and by medication that all the symptoms rapidly subsided, and the fever was stayed. Desquamation occurred only on those parts of the skin where the rash was seen. The other children had free access to the room, but none of them took the disease.

Several other cases were treated in a similar manner with equally good results—the fever abated after the first inunction, the rash rapidly disappearing, and all other symptoms quickly yielding to the treatment. None were isolated, other members of the family having free access to the room. In one case a mother with a younger child lived in the same room with the patient. In all these cases the children were allowed to mix freely with the others at the end of ten days, and no case of infection followed.

The author related two or three other cases in detail to illustrate the conclusions at which he had arrived, as to the power of this disinfectant to destroy the scarlet fever poison. A boy, eight years old when first seen had had the rash of scarlet fever out for two days. A brother had been sleeping with him, and two other brothers occupied a bed in the same room, while the mother and a sister slept in the sitting-room. The boy was anointed with the disinfectant and sent to the hospital, where he died after being kept four weeks at the public expense. The three other boys and the girl were directed to use the disinfectant for a week, rubbing it over their chests, and sprinkling it on their shirt fronts, and about the rooms, that they might inhale the vapour continuously during the day, and sprinkling it over their pillows and sheets that they might sleep in the midst of the vapor at night. The second day after the boy was removed the sister showed symptoms of the disease. She vomited, had a headache, white furred tongue, and a sore throat; her temperature was 103° and pulse 118. She was told she would have to go to the hospital unless she used plenty of the disinfectant and stopped the fever. She said she would not go to the hospital, so she took the bottle and saturated her pillow and sheets with the fluid. For the remainder of the day, and during the following night she breathed air saturated with the vapor, sleeping quietly; she was given two drop doses of the oil in emulsion every four hours. When seen on the following day all symptoms of the fever had gone, no rash had appeared, her temperature was normal, she felt quite well, and had no recurrence of the symptoms of the disease. She was given a warm bath, and the disinfectant was rubbed over the whole surface of the body as a precaution. The others all escaped the disease.

The next case was that of a nurse in a family where there were three young children. When first seen she had the scarlet fever rash out over her chest and arms, the symptoms having commenced thirty-six hours previously. She was removed to the hospital and Tucker's Eucalyptus Disinfectant was ordered to be used freely in the nursery. The children were kept in an atmosphere strongly impregnated with the eucalyptus vapor for three days and nights, after that they were allowed out during the day, but the use of the disinfectant

was continued in the nursery for four or five days longer, when they were considered safe. The last case related was that of a girl eleven years of age. She was first seen on the third day of the fever, the rash was fully out, the throat was very inflamed and swollen, and the tonsils were ulcerated. Her temperature was over 104°, pulse 132, she had much difficulty in swallowing, and took very little nourishment. The eucalyptus disinfectant was freely sprinkled over the bed and about the room, and it was rubbed over the whole body night and morning for three days, and then at night only for ten days more. She took also three drop doses of the oil every four hours. The following day the symptoms were much relieved, she could drink with less pain, but the ulcers did not heal for three days. The rash did not disappear as in the other cases, but became very bright for two days and then gradually faded. Desquamation commenced before the rash had disappeared and finished on the fifteenth day. She had rheumatism in her wrists and ankles for a few days, these were rubbed with the eucalyptus; the glands on the left side of the neck swelled and were painful, the side on which the tonsil was most ulcerated; these were lightly rubbed every four hours with the fluid, and in a few days the swelling subsided. She had no albumen in her urine and on the 21st day she left London for Brighton.

A sister of this girl slept with her until the third day, after which she did not sleep with her but spent most of her time in the room during the next three days, sitting at times by her sister's bed reading to her. They were then separated and two days afterwards, which was five days from the date that they ceased to sleep together, the sister showed symptoms of the disease. She had headache, was sick, had a coated tongue, and felt very ill. The disinfectant was freely used about her, she was given an effervescent mixture with three drop doses of eucalyptus, and at the end of the second day she was well again. There were three other children in the house but none of them took the infection. The patient was isolated in her bed by the vapour of the disinfectant around her. All the infective germs proceeding from the mouth, throat, or air passages were destroyed by the vapor inhaled, and all thrown to the skin were destroyed by the inunction. With an atmosphere full of this powerful disinfectant there is no need of the doctor or nurse taking those elaborate precautions against the risk of conveying infection to others that amateur sanitarians so strongly recommend through the daily press. Every infective germ proceeding from the body of the patient is destroyed.

The aromatic disinfectants are climinated chiefly through the kidneys, in this way they destroy the germs stored in the epithelium of those organs, and by this means it is hoped we shall find by further experience that it will prevent the development of desquamative nephritis, with its attendant danger to health and life.

From the experience gained by the above treatment of scarlet fever during the last ten months Mr. Curgenven has arrived at the follwing conclusions.

1.—That no isolation of the patient in the way now practised is necessary; the skin, mucous membranes, and breath being so disinfected that he cannot communicate the disease to others although daily in the same room.

2.—In cases treated by this method of inunction during the first day of the fever the disease is arrested, no rash appears, and no desquamation follows, the inhalation of the vapour being sufficient to produce this result.

3.—The specific fever and the development of the germs of the disease terminating in six or seven days, the skin and mucous membranes being kept under the influence of the disinfectant until the tenth day, it is then safe for the patient to mix with others.

4.—Children who have been exposed to the infection for two or three days by inhaling the vapour diffused in the air of their rooms are preserved from the disease.

5.—The sequelæ are lightened or prevented and desquamation hastened; the falling cuticle being incapable of conveying infection through its complete disinfection, it is therefore not necessary to enforce six or eight weeks' isolation until its completion.

6.—The bedding requires no further disinfection as it is thoroughly disinfected during the treatment of the patient. The volatile vapour penetrates every article, even the mattress; the room also requires no after disinfection as every germ that escaped from the patient was killed by the vapour.

The oil of the eucalyptus has been used most successfully in the treatment of diphtheria by Dr. Jules Simon and other French physicians, by Dr. Murray Gibbs in New Plymouth, who used the fresh leaves, and lately during an outbreak at Uxbridge. It has been used with success in whooping cough by Dr. William Hardwicke and others. In the author's experience it prevents the infection of measles and chicken pox from spreading, by diffusing the vapor in the air of the patient's apartment. It protects from malaria and influenza by inhaling daily the vapor and sleeping in an atmosphere of it at night. And lastly, the author believes it would destroy the infective poison of small pox.—*Hospital Gazette.*

THE Royal College of Physicians of England has determined that five years shall be spent on the course of study instead of four, as heretofore.

CONSUMPTION TREATMENT DONT'S.

Don't prescribe for a chest disease until you are sure of your diagnosis.

Don't have a stereotyped prescription of cod-liver oil, hypophosphites, plenty of exercise, etc., for every case of consumption.

Don't despair of doing some good in every case; and never give a hopeless prognosis to your patient.

Don't overlook the fact that consumption is as amenable to treatment as are other chronic diseases.

Don't neglect details in treating this disease. Your success depends on your ability to control every movement of your patient.

Don't fail to realize that the pulmonary disorder is but the manifestation of a more deeply-seated disease.

Don't forget that in chronic pulmonary disease the digestive organs are of as much importance in treatment as the lungs.

Don't make up your mind to send your patient to Colorado or some other health resort as soon as you discover that he is suffering from consumption; but always bear in mind that, until he is a convalescent, such an invalid is best off in a climate to which his body has, by long residence, become adapted ; and that the practical results of high altitude treatment are not more favorable than those obtained nearer the sea-level.

Don't fail to perceive that bodily rest is the paramount factor in the treatment of this disease, and the next comes good nutritious food.

Don't let your patient dissipate his strength by walking or by exercising in any way ; and always remember that he is on the verge of physiological bankruptcy, and that he must increa e his capital stock of vitality by lessening his expenditures and by enlarging his income, or he will become insolvent.

Don't consign him to his room day and night if the weather is pleasant, and if it does not weary him to sit or lie in the open air : care being of course taken to protect him from unfriendly draughts of air.

Don't neglect to have his body well covered with woollen under clothing, which he wears day and night, and changes every three or four days.

Don't let him know what the dining table has in store for him, because he always eats best when he is surprised with food.

Don't underestimate the value of the cook. The salvation of your patient is in her hands. She must be dexterous and able to render the food tempting and digestible.

Don't forget that the evening temperature of the patient must be reduced to or below 100 ° Fahr. before you can expect much permanent improvement.

Don't waste your own and the patient's time by giving quinine, saliclates, thallin, etc., to lower fever when you have such serviceable antipyretics as antipyrin and phenacetin.

Don't discontinue the antipyrin or the phenatetin after the temperature is reduced, but administer them in smaller doses for the purpose of securing their excellent tonic effects.

Don't confide in antiseptic inhalations as having any influence on the phthisical processs, although they are often useful in subduing a troubsome cough, and in allaying a bronchial irritation. Carbolic acid, creasote, and benzoic acid are used for this purpose.

Don't overlook the value of hot poultices applied to the chest during the day.

Don't lose sight of the fact that one grain of quinine, a quarter-grain of opium, one grain of powdered digitalis leaves, one sixtieth of a grain of strychine, one five-hundredth of a grain of atropine, given in a pill four times a day is a good tonic.

Don't forget that a consumptive who on account of cough or other causes, cannot sleep at night never gets along well. Nitrous oxide by inhalation during the day and evening and potassium bromide and codeia at bedtime by the mouth, often secure rest and sleep.

Don't omit to compel the patient to practice pulmonary gymnastics, both by forcing voluntary breathing, and by inhaling oxygen and nitrous oxide from a compressed air apparatus.

Don't overlook the great value of cod-liver oil when it agrees. It is best given pure, with a little lemon juice or vinegar before and after its administration. The hypophosphites must be given when the oil disagrees, or alternated with the latter.—Thomas J. Mays, M. D., *Phila. Med. and Surg. Rep*

MEDICAL NOTES.

Prof. DaCosta recommends the use of suspension only in the early stages of *locomotor ataxia.*

For a case of *lithæmia,* before the clinic, Prof. Bartholow prescribed dilute nitric acid before meals, to cause the more perfect oxidation of the nitrogenous substance in the blood.

For *intestinal dyspepsia* Prof. DaCosta directs that a starch diet be avoided, as it is digested in the intestinal canal ; but directed that the patient should take milk, some meat, animal broths, also small doses of phosphate of sodium.

A case of *endometritis* following abortion, and in which the woman was menstruating profusely, so much so as to cause weakness, Prof. Parvin treated before the class as follows : Uterus pulled

down with tenaculum-forceps, curetted and swabbed out with Churchill's tincture of iodine, and leaving in the uterus a piece of cotton dipped in Churchill's tincture. It will be expelled in a day or two.

For a case of *cystitis* in a woman brought before the clinic Prof. Parvin directed that the bowels be kept in good condition by liquid diet and an occasional dose of sulphate of magnesia, and to wash out the bladder with the following:

℞.—Acid hydrochloric, . . . gr. viij.
Aquæ, ... f ℥ viij.—M.

Use as a wash for the bladder; should there be pain following its use introduce into the bladder the following and allow it to remain five minutes:

℞.—Morphinæ sulph., ... gr. iss.
Aquæ., ... f ℥iiiss.—M.

Another good remedy in cystitis is creolin ʒj. to a pint of water. In obstinate cases astringents must be resorted to.—*Col. and Clin Rec.*

COSMETICS FOR THE PHYSICIAN.

The secrets of the toilet, the arts by which lovely woman hides incipient corrugations, effaces blemishes, and softens and beautifies her cutaneous apparatus and its appendages generally, are rarely investigated by the physician. He contents himself with removing some particularly obtrusive mark, pulling out superflous hairs, or trying, with spirits and Spanish flies, to fasten in the too deciduous hair. Dr. H. Paschkis, of Vienna, however, has attempted to inaugurate a new era in this line, and has written a book, "Kosmetik fur Aertze," which is intended to enable the physician to add to the æsthetic enjoyment, as well as physical welfare of humanity. Paschkis's book is said by a reviewer in the *Deutsche Medizinal Zeitung* to be a thoroughly scientific one. Its formulæ are based upon dermatological knowledge and pharmaceutical experience. As illustrations we are given four formulæ for that popular domestic article "cold cream."

One of them is as follows:

℞.—Lanolin, ... 10.0
Boracis, ... 1.0
Aqua rosmarin, ... 100.0
M.—Sig.: Lanolin-milk.

A formula for seborrhœa is the following:

℞.—Kali carbonat, ... 10.0
Aqua destillat, ... 100.0
Olei æth. cinamom, . . gtt. 2.0
Olei æth. rosmarin, . . gt. 1.0—M.

For warts our scientific book of beauty prescribes:

℞.—Acid salicylicum, ... 5.0
Collodii, ... 20.0—M.

For sweating feet, five to ten per cent. solutions of chromic acid are recommended.

For dandruff and baldness there are, of course, numerous prescriptions; but, we regret to say, no specific is announced. For a simple wash, as preventive of dandruff, we find:

℞.—Kali carbonat, ... 2.0
Aquæ, ... 100.0

The formula for Hebra's dandruff water is also given, viz.:

℞.—Spts. æther, ... 100.0
Tinct. benzoin, ... 15.0
—M.

Mouth-washes and tooth-powders are given, the author warning his readers especially against the use of salicylic acid for these purposes.

We have not space to describe the merits of Dr. Paschkis's work in further detail. But it is evident that, equipped therewith, the physician can enter on even terms the contest against the balms of Récamier, the secret washes of Lola Montez, and the roborant lotions of the Sutherland and other sisters.—*Med. Rec.*

THE RATIONAL TREATMENT OF SCIATICA.

Dr. G. M. Hammond read a paper on this subject. The author considered all cases to be pathologically a more or less mild or severe inflammation of the nerve sheath or interstitial tissue. He agreed with Anstie that rheumatism, gout, and syphilis were not nearly so commonly associated with sciatica as was generally believed. His own experience with the disorder had shown that the vast majority of persons with sciatica had never suffered from these diseases, and that out of hundreds of persons with rheumatism, gout, and syphilis, a very infinitesimal proportion had ever had sciatica. It was very probable that rheumatism and gout lowered the tone of the system to such an extent as to render the patient more liable to an attack of sciatica than he otherwise would be. But, whatever might be the cause of the disorder, it should in all cases be treated as a neuritis. Pathologically, we had to deal with inflammation of the sheath of the nerve and perhaps of the nerve itself, and with a sero-fibrinous exudation, which was usually between the sheath and the nerve, but was sometimes in the substance of the nerve itself. Clinically, there was pain, which might be slight or agonizing, continuous or only present on motion, and, in old cases, there was a certain amount of atrophy of some of the muscles.

For the relief of pain the remedies used should vary with the extent of the suffering. In the severest cases, where the suffering was intense, it

was absolutely necessary to use morphine. When such was the case, it should be given in doses amply sufficient to relieve all pain, and should be injected hypodermically and not given by the mouth; the fluid should be injected as near the nerve as possible, as there was some reason to believe that morphine had a tendency to reduce the inflammation in a nerve when brought in contact with it. In milder cases, phenacetin, in a single dose of fifteen grains, which could be repeated in an hour if necessary, would be found to fulfil all requirements. Antipyrine and acetanilide could be used in place of phenacetin if desired.

To relieve the neuritis itself he depended almost entirely upon rest, the application of cold, and the use of electricity. In regard to the value of rest in the treatment of sciatica there could be no doubt. Every time the leg was moved the functions of the sciatic nerve were called into play. It was well known that the use of nerves and muscles induced a temporary congestion of the parts used, which would only have a tendency to aggrevate a condition of already existing inflammation. By rest he meant absolute rest attained by keeping the patient in bed and applying the old-fashioned long splint, reaching from the axilla to the sole of the foot. It should be so attached as to leave the thigh and sole uncovered for the use of electricity and cold. Dr. Weir Mitchell had been the first advocate of the use of the splint in sciatica. Every fourth day the splint should be removed for a short time in order to manipulate the joints and muscles to a slight degree. Cold could best be applied to the sciatic region by ice bags. The refrigerating sprays he had found less efficacious. As to electricity, it was very useful, but only the continuous current should be employed, and in the following manner: The negative electrode should be about nine by four inches in size, and should be strapped to the sole of the foot by elastic bands. The positive electrode should be about five or six inches square, and should be applied over the gluteal region, over the point where the sciatica nerve emerged from the pelvis. If there were any very tender parts along the course of the nerve, this electrode could be changed occas ionally so as to cover them. The strength of the current should not be such as to cause much pain, but should fall just short of doing so. No rule as o the current strength to be employed could be id down, as the point of toleration was different different individuals. The continuous current ıould be applied twice daily, if possible—certainly nce a day—for about five minutes at each *seance.* Iost of the text-books recommended that at the end each application of the continuous current a .mber of interruptions should be made in order stimulate the muscles. Nothing of the sort should be done. It was opposed to the scientific treatment of the disease. It irritated the nerve and counteracted, in part if not altogether, the benefit derived from the continuous current.—*N. Y. Med. Jour.*

SCALRET FEVER AND PUERPERA.—The notes which have appeared in the *Journal* on the above subject and the tone adopted by their authors as to the smallness of risk incurred by the recently confined mother from exposure to contagion, in my opinion, demand the most serious thought, and I trust will call forth an expression of opinion, based on experience, which may determine the question. Does scarlet fever when brought in contact with a puerpera render her liable to great risk of becoming the victim to what is known as puerperal peritonitis, uterine phlebitis, or the more general name puerperal fever? My experience tells me that it does. I have seen too many sad instances in my own practice, as well as that of my neighbours, to doubt it. At the same time I must add, that was before antiseptics were heard of—in those days I simply declined attending midwifery, in spite of threats and entreaties, when I had cases of scarlet fever on my list.

I had also seen the same fatal results when the puerpera was exposed to the contagion of measles, and regret to have to record a case which has just taken place in my practice On December 19th last a youth came home from a public school where measles was prevalent; he sickened of it on the 21st; a brother and sister followed on the 26th—cases were so mild no advice was deemed necessary. On January 2nd I was sent for to another member of the family on account of something else. I then learned that there were three cases of measles in the house. The mother, who expected to be confined on the 24th, had attended them; nursed them. She showed the disease on the 7th; on the 11th another child had it, and the mother got out of her bed to nurse her. All the cases ran a mild course, and consevalence was complete by the 16th, when I discontinued attendance.

I gave orders that the children were to be removed into lodgings at once, that the whole house was to be thoroughly disinfected, and that the carpets and hangings were to be removed from the bedroom about to be occupied by the mother, and that from its ceiling to its floor it was to be purified; all this was done. The confinement took place on the 21st, before I got to the house. A skilled nurse did all that was needful, and showed me the placenta, etc. The infant was born with the measles out and desquamating in some parts. All went well till the 24th, when after a slight rigor, fever set in; pulse 130; temperature 104,-2° ; headache, sickness, pain over abdomen, restlessness, lochia natural. I gave 10 grains of an-

tipyrin and one drop of tincture of aconite every hour, applied turpentine stupes to the body, and in seven hours found my patient relieved from all her unpleasant symptoms, and quite cheerful. She passed a good night, had refreshing sleep, and next morning I fancied the attack had been what in Yorkshire is called a "weid,"—a passing febrile wave which in a few hours leaves the patient as well as before. On the 25th, felt quite comfortable, on the 26th the same; on the 27th I noticed a marked change; countenance pinched and anxious, pulse 130; tongue parched, veins of left arm swollen painful; womb tender, full; veins of thighs and legs hard, very painful; temperature 98.2°; discharge nearly ceased, but nothing offensive. I telegraphed at once for Mr. Scattergood, of Leeds; we did all we could, all we knew, but she sank in twenty-four hours, after the appearance of phlebitis. The lowness of the temperature in conjunction with the severity of the symptoms was the worse feature in the case; now the question comes, did this lady's blood, after having got rid of the original attack of measles, ten days before her confinement, become a second time poisoned by the child in utero whilst suffering from the same disease.— A. S. Myrtle. M. D. *Brit. Med., Jour.*

ALBUMINURIA AND ECLAMPSIA OF PREGNANCY.—Dr. E.P. Hurd (*Thera. Gaz.*) concludes as follows: The treatment of puerperal eclampsia includes the prophylactic treatment and the treatment of the convulsive seizures. Many pregnant women have albuminuria and nephritis, and go to their full term without convulsions. In other cases there are early warnings that there is danger ahead. Among the symptoms of renal insufficiency are headache, drowsiness, tinnitus aurium, perhaps more or less dimness of vision, or blindness of one or both eyes, dizziness, dyspnœa, especially on exertion, nausea and vomiting; the urine is scanty and loaded with albumen, while the percentage of urea is not more than one-half or one-fourth the normal. Here the duty is plain. The patient must refrain from work, be put on a diet of milk, with or without Vichy water, and fruits, with a minimum of animal food. Saline diuretics, as cream of tartar or acetate of potassium, may be prescribed, and tincture of chloride of iron in full doses three times a day. Also a full dose of Glauber's salts in the morning to promote free elim ination by the bowels. It may be expedient to give at bedtime a full dose of fluid extract of jaborandi, to produce profuse sweating, or to administer hypodermically one-eighth of a grain of pilocarpine, or even resort to the wet-pack or hot-bath. If, in spite of these efforts to relieve engorged kidneys and protect the irritated nerve centres, the patient becomes worse, and convulsions seem imminent, premature labor should be induced. When called to treat a woman already in convulsions, if labor has not already commenced, it must be expedited by artificial means under chloroform. If labor is advanced, and the os is dilated or dilatable, the patient must be immediately delivered by the forceps or by version. A ten-grain calomel powder may be placed on the patient's tongue, and, if the vascular tension seems high, sixteen ounces of blood may be taken from the arm. It will seldom be desirable to repeat this venesection. Chloroform should be administered to complete anæsthesia, and the patient should be kept under its influence as long as convulsions threaten. As adjuvant to the chloroform, a full dose of chloral may be given by mouth or by rectum. possibly, in obstinate cases a hypodermic of morphine may be advisable.—*Med. Recorder.*

WOOD AS A SOURCE OF HUMAN FOOD.—In an address at Heidelberg by Victor Meyer, it is announced "that we may reasonably hope that chemistry will teach us to make the fibre of wood a source of human food." What an enormous stock of food, then, will be found, if this becomes possible, in the wood of our forests or even in grass and straw! The fibre of wood consists essentially of cellulin, $C_6H_{10}O_5$. Can this be made to change into starch? Starch has exactly the same percentage composition, but as everyone knows, it differs very much in its properties, and the nature of its modecule is probably much more complex. Cellulin is one of little or no dietetic value, and it is not altered, like starch, in boiling water. It readily gives glucose when treated with strong sulphuric acid, as is easily shown when cotton-wool, which is practically pure cellulin, is merely immersed in it. Starch gives the same product when boiled with weak acid. The author further quotes the researches of Hellreigel, which go to show beyond dispute that certain plants transform atmospheric nitrogen into albumin, and that this process can be improved by suitable treatment. The production, therefore, of starch from cellulin, together with the enforced increase of albumin, in plants, would, he adds, in reality signify the abolition of the bread question. It must be borne in mind, however, that theory, fascinating and promising though it may be, is not always capable of being followed up by practical result.—*The Lancet.*

LACTATION DURING MENSTRUATION.—Ever since the days of Hippocrates and Galen, the belief has obtained that perfect lactation was inconsistent with the return of the menses. In a paper recently read before the Royal Medical Society of Vienna, by Dr. Schlighter, the result of this belief is seriously called in question, and there seems good reason to conclude that the effect of menstruation on the milk is not necessarily detri-

mental. The author obtained a number of samples of milk furnished by menstruating nurses and analyzed them with the result of showing that, as a matter of fact, the relative proportion of casein had undergone no diminution. The quantity of fat was variable, but the variations did not exceed those met with in non-menstruating lactifers, and the maximum occurred just as often during a menstrual period as after or before. On only one occasion did the proportion of the non-fatty constituents diminish to the extent of 1.5 per cent., and the proportion remained practically the same. He remarked that in the cow the advent of the rut does not produce any noteworthy variation in the quality of the milk. Taking the results of the analyses as a whole, it was found that the variations in the quality of the milk before, during, and after, menstruation were not as marked as in milk drawn at different hours of the day under ordinary circumstances. An examination of the infants, moreover, failed to demonstrate any constitutional disturbance or failure of nutrition, provided the mensus did not return earlier than the sixth week. Although we are not prepared to endorse the very categoric conclusions of the author, it may be admitted that the occurrence of menstruation in nursing women is less hurtful than has generally been believed, but it is none the less a matter of clinical observation that their recurrence does diminish the quantity of the secretion, and may even cause it to cease at an earlier date. The supervention of pregnancy is under any circumstances a barrier to continued lactation, as much in the interest of the mother as in that of the child.—*Med. Press.*

Infantile Convulsions.—J. Lewis in Smith, discussing the treatment of convulsions, starts out by saying: "Fortunately, inasmuch as the physician, is often required to treat eclampsia in ignorance of the cause, the same measures are demanded to a considerable extent in all cases. As early as possible in the attack the feet should be placed in hot water, to which mustard is added, or if it can be procured with little delay a general warm bath may be used in place." I must enter my unqualified disapproval of such a routine method of treatment. In many, *very* many of these cases the hot bath plain or medicated is a positive injury and should not be used at all. In place of benefiting the patient we make it worse.

The first duty of a physician when called to a patient suffering from eclampsia infantilis is to use thermometer, and while this is being done he can make a survey of the case before him. He should ascertain if the child has had scarlet fever; if not, is it in the vicinity; if it has had, how long since; has it whooping cough, pneumonia, measles, a serious fright; what has it been eating for the past twelve or twenty-four hours; are there any indications of meningitis, malarial affection, etc. At a glance he can tell whether it is pale, thin and illy nourished, and whether it is liable to be rickety. It is only after this careful survey that the practitioner can act intelligently. When the thermometer is examined, should it record a temperature of 104° or 105° the hot bath should never be used, as it only adds fuel to the flames, but on the contrary the cool bath is indicated with cold to the head.

My attention was first directed to this some years ago, when called to see a little boy some six years of age who had had a spasm, and when I reached the bedside was just having a second. Glancing at the little fellow I saw he had a high fever, and on using the thermometer found his temperature to be 104½°. I said to myself will not a general hot bath do this child an injury? On questioning the mother I found the child had been eating some indigestible food, and had shown some signs of suffering from malaria. I requested the mother to bring me some tepid and cold water. The cold water I directed her to apply to the child's head while I proceeded to sponge the body and limbs with the tepid water, which I gradually reduced in temperature until it was decidedly cool. I had the satisfaction of seeing the child's temperature reduced to 101° in a short time, and he had no more convulsions. I gave him a cathartic to carry off any offending material that might be in the child's bowels, and left him some aconite and gelseminum to hold what I had gained, and some one-grain quinine pills to take on the following morning. At this time I found the patient quite bright, free from fever, with no indications of a return of the spasms. I have used this since then with the most gratifying results.

During the actual attack chloroform may be administered, but it should not be entrusted to the hands of an untrained and unskillful nurse. If we suspect the ingestion of indigestible food, an emetic or a cathartic, or both, possibly, will be proper treatment. If the patient be illy nourished and the hygienic surroundings bad, this condition of affairs must be remedied. The former by iron, quinine, cod-liver-oil, and the latter by pure air, absolute cleanliness, proper clothing and plenty of outdoor exercise, together with good food. Other remedies will suggest themselves from time to time and will be applicable in the concrete case, such as bromide of potash, either alone or combined with chloral hydrate. When these cannot be swallowed they should be thrown into the rectum in suitable doses.—Dr. Dickey in *Med. Compend.*

Heart Disease Complicating Pregnancy and Labor.—Prof. Simpson thinks that there is no risk in the more or less continuous use of cardiac tonics, and especially of strophanthus, during the pregnancy. He has never seen anything but good

result from their administration continued throughout the gestation. I had a case of mitral stenosis in my practice about three weeks ago. The patient, aged twenty-eight, primipara, had an attack of rheumatic fever twelve years ago, and had suffered from the heart lesion ever since. Cardiac compensation was evidently completely established and only broke down on her becoming pregnant. She was treated continuously with digitalis for several months before the birth of her child, larger or smaller doses being given according as it was found necessary, and this continuous administration, he had no hesitation in saying, did her a great deal of good. On his visit to her after labor had begun, he found the first stage pretty well advanced, the breathing very much embarrassed, the pulse irregular and very rapid. During a pain, the embarrassed breathing became greatly exaggerated; the pulse, although the vessel could be felt, could not be counted, there being only an irregular quiver; the face became completely cyanosed from the venous engorgement of vessels. He had her at once placed under chloroform, but very soon changed to ether, and found that the pulse was sustained better. He terminated the labor, which was a breech, as rapidly as possible. In the second stage, the patient's condition was considerably worse than the first,—so much so, that he expected she would succumb from cardiac failure. During the labor he gave her twice two min. of tinct. strophanth. hypodermically, and one of Natville's granules of digitalin. For several days after her confinement she suffered from œdema of the lungs and pleural cavities, owing, no doubt, to the backward blood-pressure.—Dr. Wood, ED. *Med. Jour.*

SALINES IN PERITONITIS.—Impressed by the recommendations of Mr. Tait to resort to saline purgatives in septic peritonitis, I recommended their use in a grave case of puerperal peritonitis which had resisted opium and quinine in large doses. With two drachm doses of the tartrate of potash and soda every two hours, the pulse and temperature both subsided as soon as full purgation followed, and convalescence was at once established. Two months later I was called to see Mrs. M. in the same condition, with the same history, and the result of treatment was identical with the former. The writer has resorted to this treatment in an attack of peritonitis from which he personally suffered during the early part of this year. The pain, which had resisted large doses of opium, was greatly ameliorated when free serous discharges were established and convalescence followed without other medication. We have been taught that opium not only relieves the pain, but by arresting the peristaltic movement serves as a splint to the inflamed membrane. From my own experience I am sure that the peristaltic movements excited by salines in no wise exaggerated the pain. In a case of pelvic peritonitis following labor, the saline purgative gave such acceptable relief that my patient urged the continuance of the drug even after we considered it unnecessary. —Miltenberger, *Maryland Medical Journal.*

IN the March number of the *London Medical Recorder* appears the following article, commendatory of a well-known American product:

"LISTERINE is an antiseptic and deodorizing preparation which has for many years been a favorite with American surgeons. Its qualities are due to the essential antiseptic constituents of thyme, eucalyptus, baptisia, gaultheria and mentha arvensis, in combination with which is associated a stated quantity of benzo-boracic acid. Experience points to its reliability in obtaining that condition of asepsis which is the ideal of every surgeon, and it has the distinct advantage of being fragrant and non-poisonous. Its antiseptic and and anti-fermentative properties are not confined to lesions of the surface structures, and it is largely used for internal medication, in doses of a teaspoonful, in suitable cases. It does not coagulate serous albumen, and it is thus free from the drawback which so markedly limits the action of such agents as corrosive sublimate, most of which are, moreover, extremely poisonous. Listerine, then, is an agreeable and powerful antiseptic and deodorizer, well adapted for ordinary surgical work, available for internal administration, and useful for gargles, mouth washes and lotions, for which purpose it may be employed without hesitation, seeing that no mishap can occur, even in unskilled hands."

VIRGIL MCDAVITT, M.D., Quincy, Ill., says: "I usually find Celerina to be a very agreeable and acceptable nerve tonic, quieting and calming nervous irritability and causing sleep oftentimes after spells of continued wakefulness, adapted to use in much the same cases as valerian, assafœtida, etc., not a cure all, but a valuable addition to our armamentarium in the treatment of a class of cases which are often most vexatious and trying to the physician and worrying to the patient. In these cases I have often prescribed it alone or combined it alone success."

IN cases of consumptive tendencies, and in the latter stages of phthisis, Wyeth's Fluid Malt Extract will be found to improve the appetite, and promote the assimilation of carbonaceous food, supplying the waste of elementary matter, fortifying the system and enabling it to better resist the undermining effects of the disease. It also acts as a roborant in all cases of debility, and is a most valuable addition to the tonic and restorative treatment required in convalescence.

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℞ Ext. Cannabis Ind. fl. . . . ½ oz.
Aletris Cordial [Rio] . . . 7½ oz.

M. Sig. Teaspoonful every four hours.

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TREATMENT OF CONGESTIVE NEURASTHENIA.

The term Congestive Neurasthenia or nerve depression has been employed as a name for a functional cerebral trouble, more or less common in all localities, but especially prevalent among those who lead anxious, wearying and worrying lives: those who are daily subjected for long periods of time to severe mental strain, as the heads of mercantile firms carrying a large business with perhaps insufficient capital, where the financing of the firm becomes a hideous nightmare—never wholly got rid of, to the man responsible for that firm's paper. No matter what the form of worry may be, so that it is severe and constant, the result will in certain constitutions be the same. Thus we have known one well marked case in a farmer, a man who, striving and ambitious, was constantly in the habit of taking hold of more "good things" in the way of business than his limited capital would allow him to carry easily. This man, the picture of rugged health, suffered for years from all the symptoms of congestive neurasthenia, and doubtless suffered just as great martyrdom as does the manager of an enormous mercantile firm that sails in rough water for years. We mention this case especially, and similar ones might be multiplied indefinitely, to show that this trouble is not confined entirely to town-dwellers, that it is not necessarily accompanied by outward and visible signs of ill-health, but that wherever great and continuous mental strain falls upon an individual, no matter what his or her environment or walk in life may be, there this terrible functional trouble may be found.

How often do we have patients in whom we can, after going carefully over the various systems, find no evidence of disease, complain of want of interest in everything about them; of having no sense of well-being; general distress; fear of some impending calamity, as financial ruin; instability of purpose; inability to appreciate the society of friends or relatives, fretfulness, irritableness, melancholia, and so on up to the very border-land of insanity. Along with these symptoms may be often found uncomfortable feelings in the head, as a sense of tightness, fullness, throbbing, etc., with bright watery eyes, small pupils, flushed face, anxious, deeply-lined face and visible carotid and radial pulse. But of all the subjective symptoms insomnia is the most terrible.

One of the miseries of this disease is the fact, that as the sufferer often shows no objective signs of ill-health, he receives no sympathy from his friends, and too often none from his medical attendant. He is told there is nothing the matter; that he gives way; that, like Mrs. Dombey, all he needs to do is "to make an effort:" to throw it off, etc. Dr. Broadbent, says a recent author, speaks clearly on the subject. He says: "They may have very high color, associated with a number of symptoms of which I can give you no idea. No patients are to be more pitied than some of these, who, looking to the uninstructed eye the picture of health, are the victims of misery from which actual pain would be an agreeable distraction. These cases are in special danger from alcohol."

Such unfortunates go from one medical man to another, and have their troubles put down to the stomach, liver, nervous system, and general want of tone, and consequently run the gamut of remedies calculated to relieve these imagined pathological conditions, such as nux vomica, strychnia, arsenic, iron, zinc, the bromides, chloral, opium, etc. Hence, says Whittle, "the patient often comes with a pile of prescriptions bearing the marks of age and travel; he speaks of one agreeing with him or doing him good, but the majority are of no service. When the circumstances of patient will allow it, he is often sent for sea voy-

ages, or on long continental trips whence he returns relieved, but not cured, and only to relapse when he returns to the mental work which originally produced his lamentable condition. His sleep "does him no good," it is fitful, he awakes at three or four o'clock in the morning, and either tosses miserably in bed till daylight, or may rise and wander about the house or grounds; he dreads his work, feels dull, has no power of concentration, says he is incapacitated for the simplest duties but may perform them under the stimulus of an undue effort. He is always ready to talk of himself; indeed that is the only subject in which he takes any real interest. Now, experience has shown that medicines, whether tonics or calmatives nearly always fail to reach such cases. But the most satisfactory results are obtained from bleeding. This practice has, unfortunately, become quite unfashionable, but the younger members of the profession, some of whom have doubtless never performed the operation of phlebotomy, will, we trust, live to see it take its place again as a rational therapeutic measure. Certain it is that most surprising cures of all the evils arising from cerebral congestion due to over-strain, have been, and are still being reported as due to leeching. Half a dozen leeches applied over each mastoid process, often act like magic, the patient *at once* experiencing a sense of great relief, with sound refreshing sleep and a return of sound health and capacity for work to which he may have been a stranger for months or years. The most suitable time to apply the leeches is at bedtime, when the bleeding may be allowed to stop naturally during the night. Sometimes one leeching cures the patient, but oftener the process has to be repeated. So simple and certain a means of relieving the sufferings of neurasthenics deserves a more general adoption by the profession, to the exclusion of the practice of drugging, now so much in vogue.

CHRONIC RENAL DISEASE.

One of the most difficult affections to diagnose is chronic renal disease. In many cases its progress is unsuspected until some sudden manifestation, such as a convulsion, or some altered conditions in connection with vision, causes the patient to consult a physician. Notwithstanding the advance in pathological knowledge there is a doubt as to the cause of the disease in many cases of contracted kidney; it is generally admitted that alcohol will account for a fair share, but yet there are many cases where no cause is discoverable. Chronic nephritis with large white kidney is, in the great majority of cases, a sequela of an acute attack, and the manifestations of such a condition are of a more active character, and hence more prone to obtain considerable attention, and on account of the œdema, pallor and albuminiuria generally present it will seldom pass unnoticed. This is far from being the case in the so called granular or contracted kidney; it is from its very nature an insidious disease, and its clinical history is more characterized by chronic manifestations in other organs than in evidences directly referable to the kidney. The serous and mucous membranes are the surfaces which particularly show the evil effects of the poisonous elements which are retained in this condition; that urea is the only poisonous agent which operates potently in granular kidney is quite open to question. It is thought by many that uræmia is a poisoning of the nervous system —a toxaemia, and the poison is developed within the body of the sufferer, autotoxaemia. Bouchard claims to have been able to determine the existence of seven distinct toxic substances combined in the most variable proportions. Two were convulsive, urea itself being diuretic; one narcotic; one sialogogue; one pupil contracting; one, temperature reducing; and he traces the poisonous effects of the urine, in cases of renal disease, to (1)—Aliments and their compounds. (2)—Products of intestinal decomposition being absorbed. (3)—Secretions, such as the bile. (4) —Products of tissue degeneration. In regard to examinations of the urine in cases of chronic renal disease, they are in general far from satisfactory, beyond proving the fact that advanced renal disease may exist, and the ordinary examination of the urine reveals nothing abnormal in the character of that secretion. The most important feature of the urine is the amount of urea which it contains, and this is the very point which, in the majority of cases, passes unnoticed. Granular kidney is generally attended with decreased secretion of urea by the kidney, and the reduction in the amount of urea may occur even when large quantities of urine are being passed

TORONTO UNIVERSITY.

At the meeting of the Trinity Corporation held on May 14th, the following resolution was unanimously adopted :—

Resolved.—1. That whereas the Legislature of Canada in 1853 abolished the medical department of the University of Toronto on the express ground that it was not in accordance with sound political ecomony, directly or indirectly, to aid in educating men for lucrative professions, as this was done to sufficient extent in colleges and schools conducted by private enterprise.

2. And whereas the Government of Ontario up to 1887 continued to carry out this same policy, and for the very same reasons : And whereas since 1853 various teaching medical corporations have been established and have incurred very heavy expenditure in the erection and equipment of suitable buildings and laboratories, and have attained to great efficiency and success.

3. And whereas in 1887 the Government of Ontario so altered the University Act as to admit amongst other changes of the re-establishment of the medical faculty of the Toronto University and have subsequently appointed the entire teaching staff of one of the medical colleges of Toronto as such faculty :

4. And whereas very expensive buildings have recently been erected and equipped at the public cost, ostensibly for the use of the Arts Department of the University, but manifestly far exceeding the requirments of that department, and actually used for teaching many branches of purely medical science, which branches in all the independent medical colleges are taught by professors appointed for the purpose, who are paid out of the fees they earn. And whereas in Toronto University the instruction in these branches is given entirely by teachers paid out of the " general " as distinguished from the " medical " funds of the University ; and that these teachers though spoken of as belonging exclusively to the Arts Department are all advertised as members of the Medical Faculty of the University of Toronto.

5. And whereas, in thus appointing the medical faculty of one of the teaching colleges, and providing buildings and laboratories used by this faculty at a very large outlay of public money, and in also practically subsidizing this medical faculty very largely, by having all the teaching which the medical students receive in the Biological department given by professors and other teachers who are paid out of the general public funds of the University, while the fees received from students for this very instruction go into the "Medical fund," which is distributed, under University statute, approved of by the Government, to medical teachers who do not teach in the Biological department, but who lecture on other medical subjects, a patent, and a very great injustice is done to all the other independent medical colleges in the province.

6. And whereas, while the Government may establish laboratories of any kind, these should not be under the control of any teaching medical faculty whatever, but should be open to all the medical colleges of Ontario on precisely the same terms.

7. And whereas, in order to secure equal rights and fa·play amongst all the medical teaching colleges of the p·vince, the University of Toronto, sustained as it is b public funds, should not continue to occupy the positi n in medicine of a body eagerly competing with the in ependent medical colleges, but should have not a teach- in· faculty, as at present, but a Board of Medical Exa iners, selected from the several medical colleges, so th .t each may be equally represented thereon, and before w ich all qualified men who desire to do so from every re ognized college throughout Ontario might have the ri ·t to appear for examination.

8. And whereas, Trinity University is deeply interested in three of the teaching medical colleges of Ontario in affiliation with her, and therefore strongly protests against the present state of things as unfair and unjust to the independent medical colleges, and degrading to Toronto University itself, reducing it in medical education from the rank of a public university to that of a competing medical college.

MEDICAL COUNCIL EXAMINATIONS.

The following gentlemen having satisfied the examiners will have the L. C. P. & S., Ontario, granted them :—

D. Archer. Burketon ; J. C. Auld, Forest ; A. C. Aldrich, Port Hope ; L. F. Barker, Ingersoll ; E. J. Boys, Toronto ; J. H. Bell, Colborne ; F. S. Comfort, Campden ; A. H. Coleman, Belleville ; T. S. Cullen, Sarnia ; R. J. Chrystal, Avonton ; F. R. Clarke, Colborne ; C. B. Coughlin, Hastings ; C. B. Carveth, Port Hope ; E. M. Copeland Ealing ; D. Cunningham, Kingston ; J. Delanunt, Moorefield ; S. Douglas, Marsh Hill ; F. A. Drake, South Cayuga ; J. A. Dinwoody, Clover Hill ; F. J. Dolan, Belleville ; Clara Demorest, Napanee ; Thomas H. Ellis, Ottawa ; L. Mary Agar, Chatham ; E. H. Adams, Toronto ; H. T. Arnall, Barrie ; W. W. Baldwin, Toronto ; B. Bayley, London ; E. G. Bowers, Ottawa ; Minnie Brown, Strathroy ; J. D. Berry. Warkworth ; G. T. Bigelow, Port Perry ; R. V. Bray, Chatham ; E. T. Boys, Binbrook ; W. T. Bryans, Toronto ; P. Susanna Boyle, Toronto ; W. L. Bond, Newmarket ; W. A. Barker, Stouffville ; M. C. Black, Glammis ; J. H. Burger, Toronto ; W. S. Ferguson, Avonbank ; R. Ferguson, London ; J. E. Forfar, Toronto ; W. J. Fletcher, Toronto ; C. E. Flatt, Millgrove ; C. A. D. Fairfield, St. Catharines ; A. Freeland, Ottawa ; Mrs. Rosina Furmell, Kingston ; A. S. Gorrell, Brockville ; J. A. Ghent, Toronto ; J. H. Gimby, Owen Sound ; A. J. Goold, Mount Pleasant ; J. A. Gibson, London ; A. R. Gordon, Toronto ; W. A. Grêy, Perth ; W. C. Herriman, Lindsay ; D. H. Hutchinson, Ingersoll ; A. N. Hayes, Parkhill ; A. T. Hobbs, London ; R. M. Hillary, Aurora ; G. Harrison, Selkirk ; Mary Hutton, Forest ; C. A. Hodgetts, Toronto ; R. Hill, Aylmer ; R. J. Howell, Jarvis ; W. T. Holdcroft, Tweed ; W. E. Inksetter, Copetown ; H. Irwin, Pembroke ; A. F. Irwin, Chatham ; F. H. Kalbfleich, Paisley ; T. E. Kaiser, Edgely ; Mrs. Ida E. Lynd, Bond Head ; G. D, Lockhart, Mount Brydges ; M. W. Murray, Beechwood ; J. A. Macdonald, Toronto; A. V. Mitchell, Toronto ; M. T. MacFarlane, Ridgetown ; W. C. Morrison, Elmwood ; E. R. Morton, Barrie ; W. C. B. Murray, Harrington West ; A. C. Mavety, Odessa ; James A. McEwen, London ; H. A. McColl, Georgetown ; W. McGillivray, Whitby ; J. D. McNaughton, North Keppel ; J. H. McFaul,

Seaforth; O. E. McCarty, Belleville; C. F. McGillivray, Whitby; D. McLeod, Cannington; D. K. McQueen, Ripley; J. A. McGregor, Langwood; J. W. S. McCollough, Dundalk; W. A. A. McPherson, Prescott; A. McDonald, Vankleek Hill; Maggie McKellar, Ingersoll; James McKenty, Kingston; R. J. Niddrie, Hampton; John Noble, Arthur; C. T. Noble, Sutton West; C. B. Oliver, Motherwell; L. Phelan, North Gower; S. G. Parker, Toronto; W. M. Pugh, Milverton; W. H. Philp, Waldemar; W. Robertson, Chesterfield; T. Russell, Alton; L. E. Rice, Embro; T. B. Richardson, Goderich; C. Sheppard, Toronto; W. D. Springer, Nelson; J. M. Sifton, Thamesford; D. Smith, Belmont; C. L. Starr, Brooklin; R. Shiell, Plattsville; D. K. Stenton, Port Lambton; T. L. Stringer, Stoney Point; J. R. Shannon, Kingston; W Thistle, Toronto; J. F. Uren, Madina; F. Walsh, Guelph; G. Wright, Wheatley; Mrs. Hattie Walker, Pitts Ferry; F. Zurick, Belleville; A. P. Ardagh, Barrie.

DR. C. J. COVERNTON, KNIGHTON, ENG.

Some of the older members of the profession in Canada will remember Dr. C. J. Covernton, who was one of the first enrolled students of the Medical Department of Trinity University, which institution he entered in 1851. The Dr. passed the Board of Examiners for Toronto in 1853. After passing the London College he was offered an appointment in the Navy, but preferred the West India Mail Service. During the Crimean war he entered the Peninsular and Oriental line, and was present at several of the battles, to wit, Sebastopol and Tchernayer. On his return from India he married, and settled at Knighton, Radnorshire, at which place his sudden decease took place, April 19th, 1890.

DR. JOHN PARTINGTON RUSSELL.

We regret to announce the death, at the age of 69 years, of Dr. J. P. Russell, one of Toronto's oldest and best-known physicians. He was educated at the University of Edinburgh, where he took the degree of M.D., in 1846. He took up the practice of his profession in Quebec, but removed to Toronto in 1857, since which time he has been one of our foremost physicians. He enjoyed good health up to within a few weeks of his death, which occurred on the 14th of May, when he was found dead in his bed. The cause of death was apoplexy.

DR. W. LA FAYETTE SMITH.

We notice the death of the above named physician which took place at his late residence, Mt. Hope, January 12th, 1890, in the 52nd year of his age.

WHICH TAKES THE "PRIZE," VIRGINIA OR MINNESOTA?—In our May Number we gave some specimens of answer by candidates for Medical honors in Virginia. Here are a few from the *N. W. Lancet*, showing how things are done in Minnesota:

"The glans penis passes through the prostate gland. There is three lobes or parts of said gland."

"The testcle is a glandular body composed of glands and vascular vessels and nerves and arteries. The coverings are vas deferns, scrotal sack, tunica vaginals, testes, etc."

"The cerebellum is the middle or larger part of the brain. It has two parts or lobes, has its ramifications of arterys and vains and is supposed to be the principal seat of intelligence."

"The tensor vaginæ femoris muscle has its origin in the acitabulum and its insertion in the head of the femor."

"The psoas magnus muscle has its origin at the pubis, illium and iscium and insertion at the lower or floating ribs and strenum.

Q. "How differentiate alcoholic coma from apoplexy?" A. "In alcoholic coma there is nervous exostion: in apoplexy, congestion of the brain and some leasions."

"In cases from suffocation the bronchia remain *in situ quo*' and normal, possably very little congested."

"Give a chemical test for blood?" A. "Apply 'muriatic acid to sepparate the fibrin from the aqus portion."

"The physical properties of normal urine are hydrogen principally, together with the phosphates taken from the system, also urates and colloring matter such as indigoine, etc."

"An alkaloid is a residue or inferior part left after the principal part of a substance is taken away."

"Symptoms of scarlet fever—malice on the part of the child * * the sequelæ may be death or recovery."

" The histological ele ments found in the human body are blood urine, saliva, gall, sinovia and various gases."

" The testicles are composed of fibrous and cartilaginous tissues in different directions also of a medullary substance togather with arterys veins and nerves."

"Symptoms and treatment of chloral poisoning : symptom will have spasms, convulsions etc. Control convulsions with chloroform. Give emetics or use stomach pumps."

THE CREDÉ METHOD OF EXPULSION.—At a recent meeting of the N. Y. Medical Association, Dr. Wm. T. Lusk read a paper on the above subject (*Brit. Med. and Surg. Jour.*) in which he went over the views held by many eminent accoucheurs. His conclusions regarding the discussions of the subjects are as follows :

The discussion, however, had led to a greater degree of definiteness regarding the time when manipulations should be first employed. It seemed tolerably clear from the observations of Schroeder and others that in most cases the placenta within the first fifteen or twenty minutes after the birth of the child, leaves the uterine cavity, either in whole or in part, and then offers all the conditions favorable to expulsion. The long delay observable in so many cases left to the unaided efforts of nature, usually occurred after the placenta had sunk into the lower uterine segment ; so that it was a good rule, accepted of late by Credé, as well as others, not to resort to external manipulation until at least fifteen minutes have expired. Some, indeed, advocated a delay of thirty minutes.

In conclusion, Dr. Lusk directed attention to one point based upon his own observation. After the placenta, as the result of placental expression, had appeared at the vulva, the uterus was often hard, and a considerable portion of the membranes was still within the uterine cavity. Under these circumstances hasty traction would inevitably tear the retained portion ; and at this point it was his practice to support the placenta, and to diminish the traction on the cord until such time as relaxation of the uterus had taken place, when the complete separation of the membranes could be effected without endangering their integrity.

PHYSICAL FATIGUE A FACTOR IN THE PRODUCTION OF INFECTIOUS DISEASE.—The Paris correspondent of the *Jour. A. M. A.*, says : In a note by Drs. Charrin and Roger published in the *Revue Scientifique*, the authors endeavored to afford experimental confirmation of the generally received view that physical fatigue is a powerful factor in the production of infectious disease. They subjected a number of white rats to severe exercise (running in a rotating cage) for four consecutive days, at seven hours each day. Eight of these tired-out animals were then inoculated with attenuated anthrax virus, four animals in a normal condition of health being inoculated with the same virus at the same time, in order to serve as a standard of comparison. The result was that seven of the eight animals belonging to the first series succumbed, while all the animals of the second series survived. They thus explain the curious tendency of epidemics to break out among soldiers during great manœuvres and on campaign, and they urge that many a soldier is rendered susceptible to disease by fatigue who would otherwise have escaped.

FOR HOUSEMAID'S KNEE.—Dr. Wright, in the *Brooklyn Med. Jour.*, advocates the following treatment for housemaid's knee : Lay open the sac completely by a vertical incision in front ; evacuate the fluid : remove the rice-like bodies ; excise the fleshy bands and cords ; and cut out the vegetations. Then wash out the cavity with an aseptic lotion, and fill it with an aseptic dressing. Irritation, inflammation, granulation and repair will take place one after the other, and the sac will be obliterated in about four weeks, leaving a permanent cure.

"God and the doctor we alike adore ;
Only in danger—not before ;
The danger over, both alike are requited.
God is forgotten and the doctor slighted.—"Ex.

MICROBE FOUND IN THE URINE OF ECLAMPTIC PATIENTS.—Interested by the observations of Dr. Doléris, Dr. Blane found (*Lyon Méd.*) microbes in the urine of patients suffering from eclampsia which he did not find in the blood ; as late as the fourteenth day after the attack gelatine cultures could be made from the urine. No microbes possessing the same peculiarities could be found in urine of women who did not suffer from albuminu-

ria. He made experiments with pure cultures on pregnant and non-pregnant animals, both of which had eclamptic attacks and albuminuria which apparently depended on an epithelial nephritis. He sums up the effects of these experiments as follows :

1. General convulsions ; in rabbits death ensued soon after the convulsions. Pregnancy in these anmals is a predisposing cause.

2. Inflammatory swelling at the sight of injection in those animals surviving the primary effects, which soon passed into gangrene. In case of recovery the animals acquired a certain immunity.

3. Miliary abscesses, phlebitis, rise of temperature.

4. Diseases of the kidney of various degrees of severity and albuminuria.

THE following from the *Hosp. Gaz.* will be appreciated: The action of Sir William Jenner in giving up his lucrative practice and seeking retirement in the country may be commended to the notice of other West-End consultants of about his age, who are in a position to follow his example. He intends, it is said, while his intellect is still clear, to overhaul his papers and the literary efforts of younger days and publish them in a collected form. In this way he may serve the profession and posterity. By remaining in practice and scooping up fees until incapacitated by senile dementia, or struck down by apoplexy, as many others have done,he would do no good either to himself or anyone else.

FOR STRANGURY.—Dr. Luton, of Rheims, (*Nat. Druggist*) having highly recommended tincture of ergot internally for the immediate relief of strangury, we were recently induced to try a hypodermic injection of ergotin for the same purpose, inserting it in the fossa just behind the great trochanter. The results were all that could be desired. The patient had had a hypodermic injection of morphine about an hour previously, and was considerably under its influence when we were applied to for relief.

SULPHUR IN A PALATABLE FORM.—In our January issue we noted a formula for a sulphur lozenge which was highly spoken of by Sir Alfred Garrod. Since that time we have tested a similar lozenge prepared by the Messrs. Wyeth and supplied to us by Davis & Lawrence of Montreal. We have found it very satisfactory, fully justifying the great therapeutist's claim as to the value of sulphur in many morbid states of the alimentary canal and liver such as hepatic sluggishness, piles and hæmorrhoidal bleeding, chronic constipation rheumatoid arthritis and muscular rheumatism.

FOR ASTHMA.—Dr. Scott, (*Times and Reg.*) gives the following formula which promises well. We are inclined to think the amount of sod. nit. might be increased with advantage :

℞ Tinct. ipecac. comp. . . gtt. xvj.
Sp. ammon. aromat. . . . ℥j.
Paraldehyde, ... ℥ij.
Sodii nitrit. . . . . gr. v.
Aquæ menth. pip. . . . ad ℥j.

M. Sig. Teaspoonful in sweetened water every half hour till relief is obtained.

HONORS AT THE MEDICAL COUNCIL EXAMINATIONS.—It is so rare a thing for this body to grant honors to candidates, that Mr. H. L. Barber (Trin. Med. Coll.) may be justly proud of the stand he has taken at the recent examination. We congratulate him on his success, as being the only candidate out of the whole list to whom honors were given, and hope this distinction may be only an earnest of still greater things to follow.

AMERICAN DIPLOMAS IN GERMANY.—The action of the University of Berlin in refusing to recognize American diplomas is causing quite a breeze among some of our professional brethren in the States. It was said by a German educational official, of the Americans, that 'Your American colleges don't come up to our German standards, by any means, and are too various and miscellaneous in their character to claim recognition.'

FOR HABITUAL CONSTIPATION.—The *Med. Digest* gives the following :

℞. Aloin, ext. nucis vom., ferri sulph., pulv. ipecac, pulv. myrrhæ, saponis, āā gr. ½. M. Ft. pil. Sig.—One pill to be taken half an hour before last meal of the day.—Sir A. Clark.

Or, ℞. Ext. cascaræ s liq., f ℥ ij ; tr. nucis vom., f ℥ ij ; glaycerin, f ℥ j ; aquam, ad f ℥ iv. M. Ft. mist. Sig.—℥ j, as required.

GENERAL PRURITUS.—Dr. Wertheimer (*N. Y. Med. Jour.*) advises the treatment of general

ruritus by means of a three per cent. solution of sodium salicylate in doses of a tablespoonful thrice daily. This plan of treatment, he says, may be continued for some time, in the confident belief that it will not only promptly moderate the unpleasant and pruritic symptoms, but also radically remove the underlying disease.

INTESTINAL OBSTRUCTION.—Speaking of intestinal obstruction Nothnagel says: "I may briefly state in one sentence all the treatment I can recommen as an hospital consultant. Absolute abstinence from food; induce the peristalic action from below; still it from above; and, above all, avoid purgative medicines. Further, I know of nothing to add for the guidance of others."

TEST FOR TYPHOID FEVER—Says the *N. Y. Med. Jour*:—Recently two observers have reported favorably on the method by Ehrlich's test, a test that can not we be called new, having been published in 1882, but that does not seem to have attracted much attention. Two solutions are prepared: one containing seventy-two minims hydrochloric acid and ten grains of sulphanilic acid in three ounces of distilled water; the other a freshly prepared halfper cent. solution of sodic nitrite in distilled water. Twenty-five parts of the first solution and one part of the second are mixed with twenty-six parts of patient's and the mixture in rendered alkaline by the addition of strong ammonia-water. In urine from a typhoid-fever patient a bright orange-red color appears.

FOR ASTHMA.—Says the *Clin. Rec.:* We occasionally meet cases of continued distress despite the use of ordinary means. In such cases there is usually much bronchial tumefaction and dryness. In cases of this class nothing equals one-fourth grain pilocarpine with one-fourth grain morphine, administered hypodermically. Relief is prompt, tumefaction subsides, and is followed by profuse expectoration.

PALMAR ECZEMA.—Dr. Cline in *Med. World* says: My case, eczema of hands, or salt rheum, was cured by a recipe kindly furnished by Dr. S. T. Deane, of Nebraska. It was

℞.—Nitric acid, ... ℈ iij.
Water to . . . . . ℥ iv.

M.—Apply as a wash daily, keeping the hands out of greasy water. It was cured in a week.

BUTTERMILK AS A DIURETIC IN CHRONIC BRIGHT'S DISEASE.—Some time ago we made a note of the action of buttermilk as a diuretic. In a late number of the *N. Y. Med. Jour.* Dr. Henry D. White writes of a case in which it acted as a prompt and efficient diuretic when everything else failed. It had a beneficial effect upon the patient's condition in every respect.

GONORRHŒA IN THE FEMALE.—The following formula is given (*Jour. de Med. de Paris*) for the above:

℞.—Creolini, ... ℥ jss.
Ext. Hydrast Can. . . . ℥ iijss.
Aq. . . . . ℥ vij.—M.

Sig.—Add ℥ ij. to a pint of water and use as an injection.

BUTTERMILK AS A DIURETIC IN CHRONIC BRIGHT'S DISEASE.—Some time ago we made a note of the action of buttermilk as a diuretic. In a late number of the *N. Y. Med. Jour.*, Dr. Henry D. White writes of a case in which it acted as a prompt and efficient diuretic when everything else failed. It had a beneficial effect upon the patient's condition in every respect.

MANITOBA MEDICAL ASSOCIATION.—The recently formed Provincial Medical Association for Manitoba is officered as follows: *President*, Dr. Macklin, Portage la Prairie; *First Vice-President*, Dr. Donnell, Winnipeg; *Second Vice-President*, Dr. McDonald, Brandon; *Secretary-Treasurer*, Dr. Jones, Winnipeg.

In Virginia, any physician within 100 miles of a court may be compelled says the *Times and Key.* to attend and testify as an expert, for ordinary witness fees: 50 cents a day and mileage. And quite enough for some of them too, if we may judge by their scientific standing, by recently published report of examination.

LEGACY TO THE POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.—Among the legacies of the late Honorable Daniel B. St. John, of Newburgh, N. Y., was one of ten thousand dollars to the above. named institution.

VAIT'S treatment of pueperal eclampsia is full narcosis with opium, followed by chloroform, diaphoreses and a speedy termination of the labor.

TO DESTROY ROACHES.—The *Med. and Surg. Rep.* gives the following: Roaches may be exterminated if the following powder is liberally sprinkled in the cracks and corners of their *rendezvous*:

Borax, ...	37 parts.
Starch, ...	9 "
Cocoa, ...	4 " —M.

MEDICAL ASSISTANTS, TORONTO GENERAL HOSPITAL.—The following gentlemen have been appointed for the 1890–91: Drs. T. S. Cullen, L. F. Barker, C. F. McGillivray, R. M. Hillary, and R. J. Hill, and A. McCarthy.

TO DETECT A MORPHINE EATER.—An exchange gives a very simple means of detecting a morphia fiend. By adding a few drops of tinct. fer. perchlor. to the patient's urine a characteristic blue tinge appears if he is habitually using the drug.

FOR FALLING HAIR.—The *Lancet* recommends a little of the following, to be rubbed in every night:

R—Tinct. jaborandi, ...	℥ ss.
Lanolin, ...	℥ iij.
Glycerini, ...	℥ ij.

Mix by the aid of a little soft soap.

BRITISH DIPLOMAS.—Dr. J. F. Campbell has recently passed the L. R. C. P. and S., Ed. and Glasgow.

Books and Pamphlets.

A MANUAL OF OBSTETRICS. By A. F. A. King, A.M., M.D., Professor of Obstetrics and Diseases of Women and Children in the Columbian University, Washington, D.C., etc., with one hundred and fifty-one illustrations. Fourth edition. Philadelphia, Lea Brothers & Co.: Toronto: Carveth & Co. 1889.

The fourth edition of this useful work of reference is before us. The author has added two new chapters on Intercurrent Diseases of Pregnancy and Resuscitation of Still-born Children. We have consulted the work in a few instances, when time for the perusal of more pretentious volumes was not available, and have been much pleased with the concise and clear manner in which all necessary information on any given obstetrical subject is conveyed. The work should be quite as popular as in the past, the author having brought it fully up to the times. We can conscientiously recommend it to all students of medicine and to busy practitioners.

A NEW MEDICAL DICTIONARY, including all the Words and Phrases used in Medicine, with their proper Pronunciation and Definitions, based on Recent Medical Literature. By George M. Gould, B.A., M.D., Ophthalmic Surgeon to the Philadelphia Hospital, etc. With Tables of the Bacilli, Micrococci, Leucomaïnes, etc., of the Arteries, Muscles, Nerves, Ganglia and Plexuses; Mineral Springs of U. S., Vital Statistics, etc. Small Octavo, 520 pages. Half Dark Leather, $3.25; Half Morocco, Thumb Index, $4.25. Philadelphia: P. Blakiston, Son & Co.; Toronto: Carveth & Co.

This is an excellent work. It is compact, easy to handle, complete and cheap. It is one of the best, every-day, working dictionaries published, containing, we believe, all the new words, and omitting none of the old ones that are not obsolete. We heartily recommend the work both to practitioners and students.

THE DOCTOR IN CANADA; his Whereabouts and the Laws which Govern Him. By Robert Wynyard Powell, M.D., Ottawa, Ont.

In the work of Dr. Powell just to hand, we have a very useful and much needed work to the medical man and to the public; herein is concisely and clearly set forth the various Provincial Acts governing the practice of medicine in Canada, as well as the various health acts and measures of sanitary legislation now operative in the Dominion. Every hospital existing in the Dominion of Canada is carefully described and reliable data furnished of its equipments, staff and details. The medical teaching institutions of Canada, the laws relating to coroners, etc., the medical press and all matters whatsoever relating to the doctor and his profession are to be found within the covers of Dr. Powell's carefully prepared manual. We do not hesitate to express our highest praise and best congratulations of the doctor's work, and if the book were carefully read by every doctor and lawyer in this country there would be a clearer comprehension of the physician's privileges and duties that at present obtain in many quarters

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Original Communications.

PRESIDENTIAL ADDRESS, ONTARIO MEDICAL ASSOCIATION. JULY 11TH, 1890.

BY J. ALGERNON TEMPLE, M. D.

GENTLEMEN,—I owe you my best thanks not only for the honor you conferred upon me in electing me your president, but also for the pleasure you have enabled me to feel as I rise to welcome you to our tenth annual meeting. And, however great and sincere a pleasure it may be to welcome my friends from Ontario, they will pardon me if I experience an even keener satisfaction in offering in their name and my own, our warmest greeting to our guests from the United States and from the sister Provinces. We owe them a deep debt of gratitude for coming to take part in our deliberations and discussions. We cannot but highly appreciate the honor they bestow upon our Association by their membership during their stay. To all of you, gentlemen, I will express a hope that at the expiration of my term of office I shall in no way have forfeited your confidence, and that the interests of the Association will not have suffered under my care.

We have to lament that several of our number have been removed by the hand of death since we last met. To two of them I will briefly allude as being very worthy ond distinguished members of the Association, Dr. Mackay of Woodstock, and Dr. Yeomans of Mount Forest. Both had occupied the position of Vice-President and took an active interest in all that tended to the welfare of the Association.

In the neighbourhoods where they lived they enjoyed the confidence of their patients, and were generally respected for their talents and honorable career. They were foremost in all undertakings that aimed at our well-being as a body, and you will remember with what attention and pleasure we used to listen to them here. Our deep sorrow for their early death can be lightened only by the thought that they have left an honorable record behind them to keep their memory green, and to be an inheritance for the profession they loved and served so well.

A resolution was passed last year to memorialize the Hon. Minister of Finance, that all surgical instruments should be admitted free of duty. Acting on that resolntion I wrote to the Minister at Ottawa, setting forth in as strong language as possible the desirability of having the duty abolished. I regret that we did not meet with success, as you have already learned from the reply to our communication that has been read by the secretary.

Another point raised by the committee on registration, was in reference to the registration in Canada of English registered practitioners. I have made very full enquiries of Dr. Pyne, the Registrar of the C.P.S., Ont., and I find that the College has been in constant correspondence on the subject with the English authorities. The C. P. S. is quite willing to register English graduates in this country, provided that a similar privilege of registration in England is accorded to graduates of the C. P. S. of Ontario, and it is a matter for regret that an agreement of this kind has, so far, not been arrived at. The English authorities, while fully recognizing the high standing of our examinations, are not willing to place our graduates on the English register. They offer us a colonial register which, in my opinion, the C. P. S. of Ontario was justified in refusing; for we should, by accepting it, have the appearance of placing our men on a plane of inferiority. While we cannot well agree to reciprocity on other than an equal footing, we may yet hope that a way out of the present difficulty will be found. When we consider that, for one Canadian who desires to register and practise in England there are probably five or more Englishmen who come to practise in Canada, it is evident that the English graduate has more to gain from a satisfactory settlement of the question than his Canadian fellow.

With reference to the examinations as conducted by the Ontario Council, I may venture to speak without presumption. After fifteen years experi-

ence in medical teaching, I do not hestitate to say that there is no country, not even England, in which a higher standard is required of the medical student than in ours. The diploma of the C.P.S. of Ontario is a guarantee that its holder is fit to practise in any part of the world. Indeed, our system of examination and graduation might well be taken as a pattern both in England and the United States.

I trust, gentlemen, that we shall not close our present session without appointing a committee to memorialize the authorities to have the law so amended, if possible, that in all suits for malpractice security for costs shall be given before commencement of action. It is scandalous that we should be obliged to pay not only our own costs in defence, but also in a majority of cases the costs of the other side. To render keener the injustice under which we suffer, it is notorious that in many instances where these actions are brought, the services of the physician have been given gratuitously, because the patient was too poor to pay for them.

I would also suggest that some action be taken towards securing a uniform licence for the Dominion. It borders on the ridiculous that a man who has graduated before the Council here, and wishes to settle in Manitoba, should be obliged to pass before the Manitoba Council as well. If each Province were represented on the board of examiners it could be easy to set this right, to spare the young student a hardship and his pocket an expense that he may be in no position to bear, after the final outlay on his medical course.

In thus pleading the cause of the student, I feel confident of your sympathy and support.

There is one more subject I would wish to bring to your notice in the hope that some united action may be taken to rectify what I believe to be a positive injury to our profession, I mean the practice of attending lodges and clubs for an annual fee of so much per head. I regret to say that this custom is becoming more widespread every day in our midst. I do not speak from motives of jealousy or personal interest, because I myself have none of it to do, but because I have always condemned the practice as one lowering the standard of our profession. I sincerely believe that the man who indulges in this practice does himself a great injustice, by giving his services for a fee far beneath their value. He injures his fellow-practitioner by depriving him of the legitimate means of making his living, and he lowers his profession in the eyes of the public by allowing them to buy his services at their own price. Surely if the laboring man by united action can fix the price and value of his labor, and declines to work unless he gets what he believes he is worth to his employer, we, as a profession, ought to be able to maintain a uniform standard of fees. It is a subject I would earnestly commend to your most careful consideration, and see if some means cannot be devised to rectify the present evil.

After a very able and interesting *résumé* of the career of the Association the President continued:

I will now take advantage of the article of the constitution that allows the President the privilege of referring to anything of general interest to the profession, and ask your attention for a few minutes to the etiology of the so-called puerperal fever and the best *method of preventing rather than curing this dread complaint.*

Time will not allow me to enter into the subject as fully as its importance demands, and you must pardon me if I am particularly brief.

We are all general practitioners. We all have to do with midwifery and have all experienced the anxiety caused by cases of obstetrics, especially by those complicated with puerperal fever. It is time this rather vague name was dropped and one more definite adopted. The term "Puerperal Infection," as suggested by Dr. Garrigues, appears to me to be very suitable. Firstly, then, what is the nature of the febrile and inflammatory processes that frequently follow child-birth? And, secondly, are these changes due to some morbid condition generated within the woman's system, or do they come from without? If they come from within, why is not every woman similarly affected? If they come from without, what is the nature of the virus? Where does it come from, and how best can it be prevented?

These are questions I have frequently put to myself, and often indeed have I found them difficult to answer.

Firstly, I do not believe that the so-called Puerperal Fever is a specific disease peculiar to the lying-in condition, but that it is identical in every way with surgical septicæmia, or pyæmia, due to the activity and development in the system of micro-organisms, which, when introduced under

favorable conditions, produce the symptoms of childbed fever. These micro-organisms, being once in the woman's body, so overwhelm the system by their rapid development as to produce death. No pathological changes have ever been discovered in puerperal fever differing from septicæmia in general, except in situation. Different women are affected in different ways.

According to Pasteur, the innocuous micrococci that live in the vagina become dangerous if they are developed in great numbers, and the different symptoms are to be explained by the different organs to which these microbes are carried. Some go to a gland, become arrested, form an abscess and are evacuated. Some find their way into the general peritoneal cavity and from thence into the general system. Another explanation of the difference in the symptoms is the greater power of resistance of one constitution than another. That the symptoms are, in the majority of cases, due to the introduction from without of some poison is, I think, demonstrated clinically by the fact that since the introduction of antiseptics into midwifery we hear much less of puerperal fever and its fearful results. Undoubtedly the retention in the uterus of clots, pieces of membrane, or placenta, forms a starting point in many cases. But, on the other hand, look at the bruised, perhaps torn vagina; where we have a properly prepared ground for the reception and development of these dangerous organisms, especially so in the primapara.

Bacteriologists deny to-day that the woman herself can produce the poison. The germs must be brought from without to cause putrefaction and infection. We know of the existence of microbes in the vagina of a healthy woman. They however do her no harm, because the vagina and cervix are protected by their epithelium, and they cannot enter into her system. But when this protective covering is destroyed they find an entrance and may produce all the train of symptoms. If this is the case, it is our duty to prevent, by every means in our power, *the introduction* or development of these microbes. The altered condition of the patient's blood during pregnancy, the general plethoric condition, the increase of the colourless elements, and decrease of the blood corpuscles, the increase of the leucocytes and surplus of fibrine are strong predisposing causes to inflammatory diseases. This poison may be brought from patients similarly affected, from decaying vegetable matter, from some of the zymotic diseases; from a dunghill, cesspool, sewer, or from stagnant water.

Dr. Goodell has lately suggested as a possible source of the poison, an imfected closet on which the patient may have sat during labor for the purpose of evacuating the bladder or bowels, and he very properly warns us against this danger. The poison may be brought to the patient by the hands or instruments of the doctor, midwife, or nurse; by a sponge, or dirty, soiled rag, used to protect the bed. It will cling to our fingers under the nails, and on making the necessary vaginal examinations we introduce and deposit it in the vaginal canal, from whence it becomes rapidly absorbed.

I do not believe in the air being a medium by which the poison is carried from patient to patient. I do admit that the air in a badly drained and ventilated house, or over-crowded lying-in hospital, may become the medium; but it is because of the unsanitary condition of that particular place that the air may become so loaded with the virus as to readily infect those breathing and living in it. In speaking of the air as a medium, I allude to the air outside our dwellings, and my contention is, I think, proved by the fact that of two physicians living and practising in the same locality, one may have the disease among his patients while the other has not. The one carries the poison through the medium of his hands from patient to patient, because he fails to observe the strict rule of antiseptics. The other is scrupulously careful, and he has no cases. A living ferment, once introduced into the system, is capable of reproduction, providing the proper conditions for its development are present.

After this brief review of the nature of the disease, it remains for us to see how we can best prevent its onset and spread.

Firstly then, before making any vaginal examination, the physician should thoroughly wash and disinfect his hands in hot water and soap, with some disinfectant in it, carefully cleaning his nails. He should also be provided with some such lubricant as carbolized vaseline. He should have prepared a solution of perchloride of mercury of the strength of 1 to 2000, in which, before and after he has made an examination, he should immerse his hands, first washing them with soap and water.

He is then ready for his next examination. My own plan is as follows: On entering the patient's room, and previous to examination, I thoroughly wash and cleanse my hands and nails in simple hot water and soap. I then dry them and immerse them in the perchloride solution, which I have previously prepared. I next anoint my fingers with carbolized vaseline and make the examination. After its completion I again wash my hands in plain hot water and soap, and again immerse them in the mercuric solution. I may say that I never depart from this procedure when attending a case of labor. I am also particular that the nurse should be equally careful about herself. I absolutely forbid her ever to use a sponge or a soiled piece of linen or rag. I am aware that many practitioners advise the use of an antiseptic vaginal douche before delivery. I am not in the habit of doing so. They do it for the purpose of removing those microbes which are normally found in the vaginal mucus, so as to prevent their possible entrance into the system through rents and abrasions of the vagina.

After delivery, every portion of placenta, membrane, or clot, should be entirely removed, and firm uterine contraction secured. Careful inspection of the vulva for lacerations should then be made and if any exist, even though small, they should be carefully washed with a weak perchloride solution and brought closely together with sutures. This point in practice cannot, I think, be too rigidly insisted on, for I feel satisfied that the neglect to repair lacerations is frequently the cause of puerperal infection. By immediate stitching we secure primary union in the large majority of cases, and we seal up those open-mouthed vessels that so rapidly absorb all poison brought in contact with them. I also wash out the uterine cavity with a 1 to 5000 solution of mercury, when for any reason I have had to introduce my hand within it.

The after treatment consists in the use of disinfectant douches every four hours, for just as many days as there seems to be need of them. I will venture the opinion, in concluding this short monograph, that the physician who scrupulously follows out antiseptic midwifery in all its details, will very rarely indeed have to contend with puerperal infection.

The summary of the whole is this:—*Firstly*—Puerperal fever is a preventible disease in the large majority of cases. *Secondly*—By strict antiseptic precautions the spread of the disease may be prevented. *Thirdly*—I believe it to be reasonably safe to attend a fresh case of confinement even when we have a case of puerperal septicæmia under treatment, provided before going to the bedside we change all our clothing and thoroughly wash and disinfect our hands and instruments in a solution of perchloride of mercury. *Fourthly*—I am of opinion that the most frequent channel of infection is *through rents and abrasions* of the maternal passages, and too much attention cannot be given to secure primary union in all cases of lacerations, even when they are small.

PURPURA FOUDROYANT.*

BY DR. J. E. PICKARD, THAMESVILLE, ONT.

In bringing this subject before the Association, it is not with the expectation of adding anything to your store of medical knowledge, but rather from the hope of gaining some knowledge from your opinions and experience, which I hope will be freely given in the discussion.

I will introduce the subject by relating the history of a case that lately came under my observation, the only one of the kind I ever saw.

Charlie B., a bright child æt. fifteen months, had always been healthy, having never had any illness excepting a mild attack of measles when six months old. Was in his usual health upon retiring Saturday evening, April 19th; was apparently well upon waking early Sunday morning, but in about an hour after was suddenly taken ill, as was announced by a chill.

In my absence from home my esteemed *confrère* Dr. Fraser was called. He reported to me in a short time that he found the child in the following condition: Temp. 102, pulse rapid, and was to all appearances suffering from pain in abdomen. Child pale, and somewhat restless. Had been slightly constipated a short time. He gave the child some treatment and said he thought I had better visit the child when at liberty.

I saw the child at noon, found him very restless but not fretful, face quite pale and with a very

*Read before the Ontario Med. Association, June, 1890.

anxious expression, tossed his arms and legs about considerably; temp. 102⅘, pulse 130. Just previous to my visit he had vomited some bilious matter; mind seemed perfectly clear, apparently recognizing what was said to him, took drink when offered. Though quite undecided as to diagnosis, I thought from the bilious vomiting, the chill and fever, that it was possibly nothing more than a malarial attack, and prescribed accordingly, and as he was constipated gave him a glycerin enema which acted nicely. Upon leaving I told his parents that on account of my indecision as to the nature of his illness, I would call again in a few hours.

About six o'clock the father came for me, and with the information that the child had broken out in a rash, and now I found well-marked purpuric spots, varying in size from a split-pea to a twenty-five cent piece, covering his legs. Some on abdomen and face, right ear almost one entire purple ecchymosis. Restlessness increased, appar, ent hyperæsthesia, tossing his head from side to side and moving his limbs about restlessly. No marked delirium, temp. 103, pulse extremely rapid and weak, pallor, pupils widely dilated, the left irregularly, but cannot say whether this condition was due to the disease or the near approach of death.

Gave an unfavorable prognosis, and having another case on hand from which I could not remain away long at a time left the patient. The child died at eight o'clock after an illness of only thirteen hours. No post mortem could be obtained.

Now this was certainly a clear case of purpura. That it was not one of purpura simplex is evident on the face of it. Had it been purpura urticaria the patches would have been elevated and the disease non-malignant. There was not the slightest evidence that it was rheumatic. Nor was it scarlatinal in its character, and it could not have been from measles. Were it hæmorrhagic purpura, we should have expected some hæmorrhages from the mucous membrane or intestinal tract or some hæmaturia or something of the kind.

We must also exclude it as having been symptomatic of cerebro-spinal meningitis, because there was absolutely nothing to point to that condition other than the rash. No retraction of head or abdomen, no stiffness of spine, no epidemic prevailing. I frankly confess that my pronouncing the case to be one of purpura foudroyant does not throw much light on the subject, does not explain the pathology or make clear the etiology. It simply gives it the convenience of a name.

What think you was the condition, and what the cause? Was there an inflammatory irritation of the medulla, paralyzing the vaso-motor nervous system, thus affecting the walls of the blood vessels to such an extent as to permit the extravasations, or it is possible that it was a case of malarial or other blood poisoning so intense in character as to cause disintegration of the blood, thus facilitating its exudation? If the latter, I would have expected the other symptoms, chill, fever, etc., to have been more intense. I hope you will favor me with the benefit of your views on the case.

I have been able to find very little literature on the subject, unless it is included and classed as hæmorrhagic purpura. Reynolds, Pepper, etc., make no mention of it. In volume IV, 1889, "Annual of the Universal Medical Sciences," we find the following:

"Several cases of purpura foudroyant, as this shocking affection is called by the French, have been reported during the past year.

"Hervé was called on Nov. 5th, 1887, to see an infant of three months. Had been well until 24 hours previous to his visit, since which time she had appeared to be suffering. On examination, the little patient's face was pale and anxious, the respiratory movements frequent, and pulse rapid. Throat, heart and abdomen presented nothing abnormal. No diarrhœa or vomiting. A dozen hæmorrhagic patches the size of a ten-cent piece could be seen scattered over the legs, thighs and abdomen. About three hours later at 6 p.m., examination showed the hæmorrhagic patches much more numerous and extensive, covering the limbs and trunk and invading the face, particularly forehead and eyelids. The pulse was so feeble and rapid that it could not be counted. There was extreme agitation. No hæmorrhage into the mucous membranes. By ten p.m. the hæmorrhagic patches were really in sheets, the lower limbs being violet, with some œdema, and cold to the touch, while the abdomen was covered with enormous ecchymoses, and the face and hands with numbers of small ones. No malæna, epistaxis nor hæmaturia. Death occurred at midnight, nine hours after Hervé had first seen the patient and from the beginning of the eruption. Hervé calls attention to the rarity of this form of purpura."

Now this is a very faithful picture of my own case, and if the disease is a separate form of purpura, and so terribly fatal, and not so very uncommon, I cannot understand why such extensive systems of medicine as Pepper and Reynold's should not notice it at all.

"Three cases have been reported by Guellive, two by Henoch, and one by Rinonapoli. The latter was that of a child of two and a half years old. Petechiæ were observed over thoracic and abdominal regions. Temp. nearly normal, pulse 114, surface sensitive to the touch. Next day all symptoms aggravated; the child died of exhaustion on third day."

Cases somewhat similar have been reported by Ström and Arctauders, these also terminating very rapidly and fatally.

Von Harlingen says, speaking of this disease: "Such rare cases are of interest as enabling us to form a mental picture of this striking and terrifying disease; but I cannot wonder at the apparent absence of any attempt to save the patients' lives."

Correspondence.

OUR LONDON LETTER.

(From Our Own Correspondent.)

F. Swinford Edwards, F. R. C. S., gave a very interesting lecture last Thursday, at St. Peter's Hospital. His subject was "Electrolysis in Stricture and other Urinary Diseases." The attention of the profession has only been directed to this means of treatment for the last few years and different opinions are held as to its value.

Some say that it does no good, others that it *may* do good in a very limited number of cases, whilst others go so far as to assert that by it all forms of stricture can be successfully and radically cured.

Mr. Edwards does not hold the opinion of any of these, but his experience has shown that it is of the greatest benefit in certain cases, depending chiefly on the situation of the contraction, and that a radical cure may follow, but this is the exception.

In 1888, he treated 24 cases in the St. Peter's Hospital, with the following results: Two were cured, twelve improved, seven progressing favorably, but of these seven, four were being treated by electrolysis combined with dilatation, and in three cases he failed to make any improvement. One of these three he has since cured by this method. The two cases out of these 24, that were unimproved, were multiple strictures of very long standing and ones which had relapsed after internal urethrotomy.

Since '88 Mr. Edwards has had excellent results; and his statistics show that the best results from this method of treatment are obtained in those cases, where the stricture is situated in the bulbous or membranous urethra; and the nearer the stricture is to the meatus the less kindly does it yield to electrolysis.

If non-diltable stricture is within three inches of the meatus, he strongly recommends division. He has used electrolysis in a number of cases of prostatic catarrh, as shown by gleet and threads in the urine, and he reports 50 % of cures. He has also tried it in chronic cystitis, with marked relief for a time.

Mr. Edwards maintains that electrolysis is potent in allaying spasm, and believes that it is to this property that many of the good effects which follow its use are due, as srictures in the sub-pubic region have more of less spasm superadded. The advantages he holds, for electrolysis in the treatment of stricture are many:

1st. No confinement to bed is necessary.

2nd. Little or no risk to life.

3rd. Can be employed without giving pain.

4th. No bleeding.

5th. If unsuccessful it does not interfere with urethrotomy being undertaken forthwith.

6th. A permanent cure may follow, which is the rarest thing by any other method.

The disadvantages are two:

1st. The time it takes for the successful issue of the plan.

2nd. The difficulty, amounting to impossibility in very tight strictures, of washing out the bladder afterwards, which in cases where the urine is foul is much to be desired. This however in the vast majority of cases is not necessary.

In conclusion, Mr. Edwards strongly recommended electrolysis in the treatment of deep seated strictures of whatever kind, which for some reason or other cannot be treated by ordinary bougieism. No harm will ensue and one saves one's patient much suffering and loss of time.

He does not anticipate that it will become a routine treatment in hospitals, for neither patients nor surgeons have sufficient time to devote to it; but in private he can imagine nothing better, and feels satisfied that when it becomes more generally known it will enjoy a large amount of professional and public favor.

The method he employs is as follows: He passes an insulated electrode down to the stricture; in case of a very tight contraction, he first passes a guide to which he screws his electrode. This electrode is connected with the negative pole of a Leclanche battery, the positive pole of which is placed on the sacrum or thigh of the patient. The negative pole being lightly held in contact with the stricture, a current of from three to seven milliamperes is turned on. In from five to thirty minutes the electrode will pass the stricture almost by its own weight. No force should be used. After it has once passed it should be slowly withdrawn through the contraction and then passed backwards and forwards over the position of the stricture three or four times. An electrode two sizes larger is then passed, and in a week or fortnight's time the operation is repeated. He continues this treatment until he is able to pass a No. 22 to 26 bougie, French gauge, which the patient is instructed to pass for himself, regularly once a week for a time, but subsequently the interval may be increased in many cases to once a month. G. S. R.

Reports of Societies.

THE ONTARIO MEDICAL ASSOCIATION.

The tenth annual meeting of the Ontario Medical Association opened on the morning of the 11th June, at the College of Physicians and Surgeons, Bay and Richmond streets, under the presidency of Dr. Temple, and was we think the most successful that has yet been held. The association was founded in 1881 with 132 members under the presidency of Dr. Workman, and it has steadily grown and flourished under the management of such men as Drs. Covernton, of Toronto; Macdonald, of Hamilton; Clark, of Toronto; Worthington, of Clinton; Tye, of Chatham; Richardson, of Toronto; Rosebrugh, of Hamilton, and Henderson, of Kingston. At the last meeting there were 219 members present out of a total of 568, and this year the attendance was still larger, an excellent proof that the objects of the association commend themselves to the profession. The main objects of the association are the cultivation of the science of medicine and surgery, and the advancement of the character and honor of the profession, and in both of these important aims it has accomplished much.

The morning session was devoted principally to consideration of the reports of committees on papers and business and of arrangements. Several distinguished members of the profession in the United States—Dr. Emmet and Dr. Andrew Smith, New York, and Dr. Tremaine, Dr. Cronyn, Dr. Lathrop, and Dr. Hubbell, of Buffalo, Dr. Trenholme, of Montreal, were among the most distinguished guests, and they were all accorded a hearty welcome.

Dr. C. Trow, of Toronto, read a paper on "The Diagnosis and Local Treatment of Tubercle or so-called Phthisis of the Larynx." He devoted most of his time to the question of local treatment, and dealing with the results of that treatment he held out favorable prognosis in a certain percentage of cases, believing that in a few the disease was capable of being cured. Dr. Jenner, of Kingsville, followed with a paper on (1) "Morton's Method in Spina Bifida." (2) "Poisoning by Antifebrine." Interesting discussions followed the reading of each paper.

In the afternoon, after routine business the President's address was delivered. As the major portion of it appears in the present issue of the journal, we need say no more than that it was characterized by its practical nature, and that it was received with the most noted attention. The vote of thanks which followed was unanimous, and was we are sure the expression of the full meeting that the address was a masterly one. Dr. Emmet, then read, before the whole association, a paper upon the operation which bears his name—his mode of treatment for the repair of the lacerations of the cervix uteri. He defined accurately the cases in which it may be done with good hope of success. He also mentioned those for which it was unsuitable. The address was listened to with the greatest attention. It was regarded as a valuable contribution to medical knowledge, coming as it did from the most brilliant pupil of Dr. Marion Sims, who practically created the surgery of women in America.

A discussion followed the paper, in which Dr. Ross, Toronto; Dr. Rosebrugh, Hamilton; and Dr. Temple took part.

The Association then divided itself into Medical

and Surgical Sections, papers being read in the former by Dr. J. H. Duncan, Chatham, "Duodenal ulcer"; Dr. A. McPhedran, Toronto, "Arthritic Hæmoptysis"; Dr. W. Irving, Kirktown, "The Vomiting if Pregnancy and its treatment"; and Dr. H. J. Saunders, Kingston, "Paroxysmal Hæmaturia."

In the surgical section a paper was read by Dr. T. R. Dupuis, Kingston, on "Traumatic Tetanus," and its treatment A brief discussion followed.

Dr. B. E. McKenzie, of Toronto, made some interesting remarks on the arrangement of Talipes. The doctor showed cases in different stages of treatment, and explained the operations necessary for the relief of extreme deformity.

Papers were also read on a case of "Convergent Strabismus, with crossed Diplopia," by Dr. A. B. Osborne, Hamilton, and on "Scrotal Tumors," by Dr. Welford, Woodstock.

EVENING SESSION.

At the evening session, which was presided over by Dr. Temple, an interesting discussion in surgery on "Hernia" was opened by the Hon. M. Sullivan, Kingston. He was followed by Dr. F. Le M. Grasett, Toronto, and Dr. Waugh, London, who contributed some information valuable to the profession. "Empyæma, with Mechanical Results of Opening the Thorax," was the subject of a paper by Dr. Andrew Smith, of New York. The lecture, which was illustrated by apparatus, was listened to with the greatest attention, and at its close Dr. Smith was cordially thanked.

Dr. G. M. Alyesworth, of Collingwood, read a paper entitled "A plea for a more liberal and scientific spirit of investigation on the part of the regular or Rational School of Medicine." He was followed at some length by Dr. Richardson, of Toronto, who entirely dissented from the reader's idea, that we of the regular school are intolerant, and that there is much in Homœopathy which we might investigate to our advantage. Dr. Ross, of Barrie, also spoke on the paper.

Thursday morning.

The Association resumed business at 9:30 a. m. After routine business was disposed of the Association divided into two sections. The surgical section was presided over by Dr. Burt, of Paris. Dr. Groves, Fergus, opened the discussion by reading a paper on "Perityphlitic and Pelvic Abcess," which was received with much interest.

Dr. Ross, Toronto, read a paper on "Some cases of Extra-and Intra-peritoneal inflammation with and without abscess formation; a plea for the operative treatment of peritonitis." The reader strongly argued that an operation should in all cases be performed, as many lives were sacrificed through hesitation or want of prompt action. The meeting was, in general terms, agreed with the Dr. The third paper, entitled "Abdominal Nephrectomy for Hydronephrosis," was read by Dr. J. Wishart, London, who detailed his experience in the course of two operations. The morning session was concluded with a treatise on "Ruptured Perineum," by Dr. C. M. Smith, Orangeville.

In the medical section Dr. Sheard, Toronto, presided. Dr. J. L. Addison, St. George, read an excellent paper on the "Treatment of Pneumonia." He referred to the fact that during the past year this disease had been more prevalent than usual. It taxed the skill and judgment of physicians, and they had need to be very cautious.

Primary pneumonia, he said, was generally admitted to be a self-limiting disease, and would run its own course in spite of any treatment; yet judicious treatment would make patients more comfortable, and possibly reduce the rate of mortality. The first essential in treatment was rest in a well ventilated room. Good, nutritious food in fluid or semi-fluid state should be freely given. The shoulders should be protected with cotton batting, and over the seat of trouble might be placed a linseed meal poultice. He then gave a list of the medicines which he would use in such cases. The treatment of complications that frequently arise, such as pleurisy, hyperpyrexia, delirium, coma, jaundice, diarrhœa, malaria, abscess of the lung, was also given.

Secondary pneumonia was stated to generally occur in connection with or as a complication of influenza, measles, whooping cough, or typhoid fever, and sometimes in bronchitis and septicæmia. The treatment in secondary pneumonia was said to be similar to that given in the primary, the difference being in some of the medicines prescribed. Dr. Addison summarized his remarks by saying: "I prefer the expectant plan of treatment, sustaining the vital powers, watching complications and treating them as they arise, making every case a special study, the very cautious use of opium, digitalis in moderate doses as a heart tonic, with free stimulation for heart failure."

An interesting discussion followed the reading of the paper.

The next subject dealt with was "Some Recent Treatments in Diabetes." Dr. A. Jukes Johnson, Toronto, led in the discussion by reading a paper on the same. After a number of those present had given the result of their experience in the treatment of the disease, this section adjourned, to meet again during the afternoon.

AFTERNOON SESSION.

In the afternoon, after some preliminary business was transacted, Dr. G. S. Ryerson, of Toronto, was called upon to read a paper before the general session on "The Ophthalmoscope in Relation to Diseases of the Nervous System." The views ad-

vanced by the doctor were very well received. He emphasized the correspondence between the development and functions of the brain and those of the optic nerves, since these last were generally direct and early outgrowths of the brain. It was also notable that the eye and its appendages received the whole or parts of six out of the twelve pairs of cranial nerves. These things pointed to the intimate relationship that existed between the eye and the rest of the body. No other organ of the body contained so many different kinds of histological elements or textures of so high a quality as the eye, and hence the immediate participation of the eye in general and constitutional diseases. From the facts he had stated the doctor drew the following conclusions :—

1. That diseases of the brain and spinal cord are frequently associated with ocular disturbances.

2. That serious eye trouble may be present without subjective symptoms.

3. That eye troubles often precede and give warning of impending nerve disease.

4. That diseases of the optic nerve and retina are of great diagnostic value in nervous diseases.

5. That it is the duty of the physician to examine the eye and its muscles in all cases of nervous diseases.

Dr. Hubbell, Buffalo; Dr. L. L. Palmer, and Dr. D. J. G. Wishart, Toronto, spoke briefly on the subject introduced by Dr. Ryerson, and expressed themselves in accord with the views advanced by him.

Dr. A. T. Carson, Toronto, though feeling unwell, exerted himself and led in the discussion on Obstetrics. He became quite enthusiastic in the advocacy of his opinions, which were very well received by his brethren. Dr. R. W. Powell, Ottawa; and Dr. Allen Baines, Toronto, continued the discussion for a short time.

The President read the report of the Nominating Committee, which was adopted without amendment. The officers for the year 1890-'91 are as follows :—

Dr. W. H. Moorehouse, London, President.

Dr. Charles Sheard, Toronto; Dr. J. W. Gibson, Belleville; Dr. Powell, Ottawa; Dr. J. Wishart, London, Vice-Presidents.

Dr. J. Gibb Wishart, Toronto, General Secretary; Dr. W. P. Caven, Assistant Secretary.

Dr. E. J. Barrick, Toronto, Treasurer.

Dr. Shaw, Hamilton; Dr. Lowry, Acton, Committee on Credentials.

Dr. W. J. Charlton, Weston; Dr. Farley, Belleville, Committee on Public Health.

Hon. M. Sullivan, Dr. Waugh, London, Committee on Legislation.

Dr. J. L. Davison, Toronto; Dr. A. Primrose, Toronto, Committee on Publication.

Dr. Griffin, Hamilton; Dr. Carson, Toronto, Committee on By-laws.

Dr. A. R. Harvie, Orillia; Dr. J. F. W. Ross, Toronto, Committee on Ethics.

After the officers were declared elected the President announced the election of the following as honorary members :—Dr. T. A. Emmet, New York; Dr. E. M. Moore, Rochester; Dr. Joseph Workman, Toronto; and Dr. William Mickle, London, Eng.

Dr. Mickle is a Canadian by birth and education. He is Superintendent of Grove Hall Asylum, Bow, London, England.

Dr. Moorehouse, the newly elected President, is a graduate of Trinity Medical College of the class of 1875, and has been a member of the Association for the past six years.

Before the afternoon adjournment, the Association again divided into sections, and papers were read by Dr. Moorehouse, London, "Influenza"; Dr. Bray, Chatham, "Typhoid Fever"; Dr. Atherton, Toronto, "A case of Hystrectomy for Fibrocystic Tumor." Exhibition of patient and tumor; Dr. Howitt, Guelph, "Case of acute Supparation of the Knee-Joint, with complete restoration of function"; and Dr. F. W. Strange, Toronto, "Stone in the Female Bladder." The members then adjourned to meet again at eight o'clock for the closing session.

EVENING SESSION—CLOSING BUSINESS.

Dr. Temple occupied the chair at the evening session, which was opened with the reading of the only remaining paper, "Discussion in Therapeutics —Expectorants," by Dr. J. L. Davison, Toronto, who was followed by Dr. Spencer, Toronto, and Dr Moorehouse, London. Various reports were read. A case quoted in the legislative committee's report, dealing with an alleged contravention of the Act in South Waterloo, evoked a discussion on the conduct of chemists and quacks prescribing medicine. The committee recommended that the matter be referred to the Council of the College of Physicians and Surgeons to deal with it as they in their wisdom thought fit. This was adopted on the motion of Dr. Aikman, seconded by Dr. Lundy. The income of the Association for the year was $594.74 and the expenditure $450.95. With the installation of officers the Medical Convention of 1890 came to a close.

Selected Articles.

EXCESSIVE DYSMENORRHŒA. CHRONIC OVARITIS.

GENTLEMEN,—The first case I show you this morning is one of excessive dysmenorrhœa. The woman is unmarried, and twenty-four years old.

Her puberty began about the age of fourteen with painful menstruation, and it has been going on from bad to worse until now her sufferings have become so great that her life seems a burden to her. Cases like this are not confined to the experience of the specialist. Each one of you who engages in general practice will meet with them. Therefore you should know how to treat them.

I have not yet examined her, but let me tell you what I expect to find. I am nearly certain that there will be found an anteflection of the uterus, with a stenosis of the cervical canal. This anteflexion of the organ is the natural condition of the virgin uterus, but its exaggeration makes the flexion pathological. The cervical canal being bent, does not allow the fluid in the uterus to come away as rapidly as it exudes from the mucous membrane, so that it accumulates both in the womb itself and in a portion of the cervical canal above the flexure, producing greater and greater pain, until by dilating the parts it straightens the obstructive bend, and thus gains an avenue of escape.

For this affection the remedies that I use are either medical or mechanical. Among the former I put antipyrine foremost. This drug is of especial value, because in these cases much of the pain is not traumatic, but sympathetic. My plan is to give ten grains at once and then five grains every hour or half hour until twenty to thirty grains have been taken. If this affords relief, I know that I am on the right track, and continue this method of treatment *pro re natâ*. But if this plan fails to give relief, I adopt some other method of treatment. Instead of giving this remedy by the mouth, it is often best to administer it by enemeta, in twenty grain doses, until sixty or ninety grains have been given. This will as fully test its efficacy as the twenty grain doses by the mouth. If this fails, I resort to other remedies, hoping to find one that is of avail. A tentative empiricism, founded upon sterling common sense, is not quackery. The second medicine that I generally give is the hydrobromate of hyoscine. One-fourth of a grain is dissolved in four ounces of water and one teaspoonful of the solution, viz., one one-hundred and twenty-eighth ($\frac{1}{128}$) of a grain is taken every hour until either relief is secured or its physiological effects, which are extremely like those of atropine, become manifest.

But I think this is a case of mechanical dysmenorrhœa, and now let me see whether my off-hand diagnosis is correct. Upon making this physical examination, I find that I was nearly right, but not quite. She has a comparatively rare uterine displacement, which may, at first, sound in your ears like a paradox, viz., she has retroversion of an anteflexed womb. That is to say, the anteflexed womb as a whole has fallen backward. This mechanical obstruction—the anteflexion—by not allowing a perfectly free exit for the uterine secretions, causes primarily their accumulation, and secondarily their decomposition before they exude from the body, so that women often have foul-smelling discharges during painful menstruation.

The treatment here is rapid dilatation of the cervical canal, which should be performed as follows:

First, I cleanse the vagina by syringing it out with a 1 : 2000 bichloride solution. I now introduce my speculum, which reveals a cervix exceedingly small, and an os imperfect or developed in character. Again is the vagina swabbed and syringed out.

During this time my instruments have been lying in a 1 : 2000 bichloride solution. From this solution I take my slender dilator, which, with its curvature in the posterior direction, I shall pass up into the cervix until it meets with resistance. Then I shall turn the chord of the curve toward the opposite direction, in hopes thereby to pass the obstruction at the internal os. I fail to get the dilator to pass the angle of flexure, so I stretch open the canal with it and try again. Twice I fail in the attempt, but at the third time I succeed in passing the dilator into the uterus by carefully feeling my way.

Before going any further, let me stop for a moment to do what I should have done before beginning the operation, and that is, to introduce into the rectum a suppository of one grain of the aqueous extract of opium. This is done because after she recovers from the effects of the ether she will suffer a good deal of pain, and she may indeed need another suppository in addition to this one.

Having now passed the instrument well into the womb, I am ready to dilate slowly and carefully up to its full extent. This little instrument having done its work, the time has come to introduce a larger and stronger dilator with furrowed beaks so as to prevent slipping. I find I have a good deal of difficulty in getting this larger instrument into the womb. When it passes the internal canal its blades are slowly dilated, generally up to one inch and a quarter. But since this cervix is smaller than usual, I shall rest contented with one inch.

Having accomplished this, and with rather less trouble than I had expected, I now complete the antiseptic process by thoroughly syringing out the whole vagina and cervical canal with bichloride solution. The cervical canal being now dilated, there is not so much danger of the bichloride remaining in the womb and thus causing uterine colic, as there would be with a very small canal, which might retain the mercurial solution.

This is the three hundred and forty-second case of rapid dilatation that I have made, and the re-

sults have been most satisfactory. I happen to have these numbers at my tongue's end, because I am just now writing an article on the subject for our *University Medical Magazine.*

The *rationale* of rapid dilatation is as follows:

Just as a piece of India rubber will, when overstretched, contract again, but never to its original length, so this cervical canal will contract, but never to its original small calibre. Hence I can assert with great confidence, that the woman will be greatly benefited, if not cured. I say if not cured, because there are in the world to-day thousands of women who have never consulted a physician, and yet who suffer more or less acutely at their menstrual periods. Absolutely painless menstruation is indeed the exception.

The last thing I do is to put into the vagina a ten-grain suppository of iodoform. This is done after thoroughly cleansing all the parts once more with the sublimate solution. I have in this case torn the cervix a trifle, but it will add to the success of the dilatation, and it is of no consequence considering the antiseptic precautions used at the operation. I once made a tear as long as a third of an inch, but it was followed by no bad consequences. Indeed, until comparatively recently, the knife was constantly resorted to for the purpose of enlarging the cervical canal throughout its entire length. The medicine that she will take will be ten grains of the bromide of ammonium and five grains of the chloride of ammonium in one teaspoonful each of the compound tincture of gentian and water before meals. If much pain follows the operation, another opium suppository will be administered.

Beginning to-morrow morning, she will have twice a day a ouche of 1 : 4000 solution of the bichloride of mercury. When the vaginal injections are used, some of the fluid will be retained on account of the curve in that canal and mercurialization nay ensue. Therefore I shall direct the nurse, when she gives this douche, to press upon the upper edge of the perineum and carefully thereby expel all the fliud remaining in the vagnia, the curve of which is straightened by this manœuvre.

For nervous dysmenorrhœa I give the following mixture:

℞.—Chloral	- - -	2 drachms.
Potassium bromide	-	4 "
Camphor water	- -	6 ounces.—M.

One tablespoonful three times a day. If the pain is great, I add to this mixture three grains of the sulphate of morphine, and in some severe cases it may be necessary for a patient to take this remedy even more frequently; but I make it a rule to use the morphine as little as possible, as it deranges the stomach and digestive apparatus.

Let me here give you the benefit of a useful observation. There are many women and men who will tell you that they cannot take opium, in any form, because it disagrees with them. They will, it is true, suffer greatly from the after-effects of opium provided it is given for any nervous condition or for any nerve pain. But let them have traumatic pain—due to an accident or to an operation—and opium will perfectly agree with them. I have verified this fact so many times, that I never hesitate to give opium after a surgical operation, in defiance of a patient's protest or of that of her physician.

The causes in general of dysmenorrhœa are as follows: 1. Anteflexion, which I have just discussed. 2. Retroflexion, especially when it is congenital. Both these causes are often cured by pregnancy. 3. Stenosis, for which mechanical dilatation is the great remedy. 4. False membranes blocking up the cervical canal. For this I used to apply nitric acid, but now I prefer dilatation followed by curetting and intrauterine applications. 5. Polypi, which act like ball valves and demand removal. 6. Those cases of neurasthenia that are characterized by an irregular distribution of nerve force. Such undue discharge of nerve force may occur in other groups of muscles, especially of the circular muscles or sphincters. Thus we may have asthma from spasm of the bronchioles; aphonia from spasm ef the vocal muscles; constipation from spasm of the sphincter ani; or irritable bladder from spasm of the vesical and urethral fibres. The treatment of nervous dysmenorrhœa is rest in bed, massage, electricity, and tonics of iron and arsenic.

CHRONIC OVARITIS.

This woman has been brought to me for a diagnosis of her disease. She is thirty years old, has been married six years and some years ago had one child. After this labor she had a serious leucorrhœa, which I fear was specific in character. She is now suffering from dysmenorrhœa, retroflection, and backache, and has an irregular body behind the uterus, which feels a good deal like an ovary. Some months ago she was treated at our dispensary for a time, and improved while under treatment; but she afterwards relapsed into her former condition, and has now come to be examined with reference to the advisability of having her ovaries removed. She will be etherized, as the examination would cause her considerable pain, and I shall, while she is being etherized, take the opportunity to tell you that the woman upon whom I performed a double ovariotomy two weeks ago, on account of adherent appendages, suffered for a while with the same character of pain as if the organs were still present. This was a form of neurasthenia, and it lasted only a short time. It has disappeared and she now feels much better than for a long time.

Our patient now being unconscious, I find upon examining her, *per vaginam*, that there is an im-

movable body in the left broad ligament, which I believe to be the left ovary, that is adherent high up behind the uterus. The right ovary, too, is enlarged and plainly adherent, so that they are both giving her more or less pain and destroying her health.

I shall feel justified in removing her ovaries under these circumstances, if she desires to have the operation done after I have explained to her the results. I tell women in these cases that they will probably gradually lose in a measure their sexual feeling, although it will not cause in them so much difference as castration does the opposite sex. The popular idea, that if a woman has her ovaries removed her voice will change and hair will appear on her face, is a mistake. Such changes do not take place when the ovaries are extirpated after puberty.

It has been stated that in fifteen per cent. of the cases oöphorectomy there is a loss of all sexual desire. It is difficult, however, to arrive at the true statistics, because women do not like to be approached on this subject. It is often the case that many women, after having their ovaries removed, will have for awhile greater sexual desire than they had felt for a long time. This is because the ill health, resulting from the long ovarian suffering, has been cured by the operation. But in a few years' time there will be a lessening of sexual feeling, and in some a complete loss. In the opposite sex after castration the sexual desire may remain for some time, also the power of erection and ejaculating a prostatic fluid, which, of course, contains no semen. Analogous sexual capacity is observed in oxen, geldings, and in other altered animals long after castration.—Dr. Wm. Goodell in *Med. News.*

THE CLAMP AND CAUTERY OPERATION FOR HÆMORRHOIDS.

My object in presenting this subject to-night is not that the procedure is particularly novel or original, but because it is practiced to such a slight extent in this country that its merits are by no means appreciated. Believing it to be by far the best operation in its general application to all varieties of internal hæmorrhoids, I now propose to describe its technique in some detail and to point out what I regard as its chief merits.

The instruments required are five in number—the pile-clamp, a Paquelin cautery, a speculum, a tenaculum forceps, and a pair of scissors.

The operation is simple. Anæsthetize the patient, put him or her in the lithotomy position, stretch the sphincters with the fingers so as to be able to secure room to work, but without any idea of causing a temporary paralysis, and put in a speculum, so as to get a perfect view of the lower rectum. Having now determined upon the amount of tissue to be removed, the speculum may be thrown aside. In fact, I now seldom use it at all, as the fingers answer the purpose perfectly well. I generally begin on the pile nearest the posterior median line, so as not to be interfered with by the bleeding.

Now grasp the tumor with the forceps and draw it well down and out, and with the scissors loosen it from the margin of the skin, just as in the old ligature operation. In the groove thus made grasp the base of the pile with the clamp, and, while the enucleation is thus controlled, cut off the tumor, apply the cautery to the stump, and remove the clamp. There are two points here to be emphasized: In applying the clamp, especially where a large grip is necessary, include the tissues so as to leave the resulting scar placed longitudinally in the bowel, and, in cutting off the redundant tissue, do not fail to leave pedicle enough for a thorough cauterization. Deal with other piles in the same way, and the operation is complete. A simple dressing, consisting of a firm gauze or picked lint pad over the anus and a tight T-bandage, easily controls all hæmorrhage from the external scissors cuts.

This operation takes about two to four minutes, more or less, in my hands, although if there was any hurry it could be done in less time.

It is apparent from this description that the operation is identical with that of the ligature, except in the means of controlling hæmorrhage. In one the base of a vascular tumor is constricted by a tightly tied string, while in the other the open mouths of vessels are secured by an application of the actual cautery. In both the amount of tissue removed is the same, and in both the process of cicatrization gives the same ultimate result.

The question naturally arises, Has the clamp and cautery any advantage over the old and universally popular ligature? I think it has, and I base my preference entirely on experience, apart from any theoretical considerations. The radical cure of varicose conditions, whether in the rectum or in any other locality, can be accomplished on well-known surgical principles. Varicose veins of the leg are best treated by multiple ligation or by complete resection of varices. The operations for varicocele all aim at the more or less complete obliteration of the diseased veins of the spermatic cord, and varicose veins of the rectum differ only in locality. The rational surgical treatment is removal more or less complete. All operations are but different methods of reaching a desired result, and the best is that one which cures with the least amount of danger, pain, and delay.

Of the various dangerous complications, the most frequent is undoubtedly hæmorrhage. I speak of secondary hæmorrhage, coming on any

time during the first week, while the sloughs are separating—bleeding, sudden, profuse, concealed, but always serious in the extreme. I have the records of upwards of two hundred cases of the clamp and cautery without a single instance of bleeding.

Right here let me again urge the thorough cauterization of the stump at the time of operation, for, as hæmorrhage is the first serious complication to be feared, every precaution should be taken to avoid it.

Unquestionably the same security can be obtained from the ligature when carefully applied, but that fact in no wise militates against the efficiency of the cautery as a hæmostatic.

The second grave complication that may occur is septic infection, showing itself primarily in phlebitis, and subsequently developing any or all of the phenomena of pyæmia. Of course an occurence such as this is always within the range of possibilities in any operation—certainly in such procedures as involve the obliteration of masses of veins, and I know of no precaution that will absolutely exclude all danger of this accident. In rectal surgery thorough and complete asepticism is not possible, on account of the normal functions of the organ. As a matter of fact, the clamp and cautery operation shows up quite brilliantly in its comparative immunity from septic complications. I myself have never seen it, and in all the cases in my immediate reach there has been no such instance.

The principal advocates of the cautery, here and abroad, all strongly insist that no other method has given such results. Theoretically this is to be expected. Certainly thorough cauterization with a red-hot iron of all cut surfaces inside of the sphincter is very unlikely to convey infection.

I have dwelt on the question of hæmorrhage sand infection because of their genuine importance, they are not likely to occur except from carelessness, but must always be borne in mind as possibilities. In my own fifteen cases and in the two hundred others upon which I am writing there as been no such trouble; so I think I am justified in speaking with confidence.

There are, however, a group of exceedingly annoying symptoms that are likely to follow all rectal operations. I speak of pain and various reflexes dependent on it. Spasm of the sphincters and levator ani are the cause of nine-tenths of the distress ccompanying rectal lesions, and, curiously enough, he size of the lesion bears no relation to the degree f pain. However, the question at issue—whether he clamp and cautery operation is less liable to be ollowed by these disorders—is a matter of experience. In my own cases I can say, without hesitation, that there has been little or none. Not a single patient has been given more than a quarter of a grain of morphine all told, and most of them got none, for the simple reason that there has been no reason for using it. The usual history of a case after operation is about as follows:

In five or six hours the perineal pad is removed, and, if there is any soreness, hot applications are applied. The patient is allowed to get out of bed to pass water as soon as the desire shows itself. After that no dressing is required unless there is an external wound from the original scissors cut, and in that case a loose pad of absorbent gauze is sufficient. Often hot applications to the perinæum are very soothing, and in that way the patient generally obtains a good night's sleep without the use of anodynes. Suppositories of iodoform, belladonna, etc., serve very well to amuse the patient, but I doubt their usefulness, and, as a rule, dispense with them entirely. The one point of importance in the after-treatment is the early opening of the bowels. My rule is to give a laxative on the second night, so as to get a free evacuation forty-eight hours after operating. This occasionally causes more or less pain for an hour or two, but if put off four or five days is far more painful, and may even require the aid of an ether cone and the handle of a spoon. Keeping the bowels open from the beginning prevents much congestion around the wounds and renders the patient comfortable twenty-three out of the twenty-four hours. One is frequently asked, either by the patient or by the family physician, "When is the pain going to begin?" and as a rule, it does not begin.

Rarely indeed is it necessary to use a catheter except in cases of cystitis from enlarged prostate, urethral stricture, etc., and in those cases retention occurs from very slight causes.

So far as diet is concerned I make little or no change, unless for special reasons, but keep the patient in bed as long as possible, which generally means till the third or fourth day.

Sloughs separate entirely by the end of the first week, and then convalescence has begun. In an average case the ulcers are about healed in three weeks, but, unless the patient has been kept very quiet during that period, complete cicatrization may take much longer of course.

Undue contraction of the anal orifice may follow this operation as from any other, and for the same reason—the removal of too much tissue. This, however, is the fault of the operator alone. There is one simple rule by which it can always be obviated: Put on the clamp in such a way as to leave a band of mucous membrane half an inch or so in width between the several grips. In other words, use the same care in this as in any other operation.—Blair Gibbs, M. D., *in N. Y. Medical Journal.*

THE ABDOMINAL DISTENSION OF TYPHOID FEVER: ITS DANGERS AND TREATMENT.

Among the many complications which tend to increase the dangers and anxieties inseparable from a severe attack of typhoid fever, none are more formidable than those which are the direct outcome of the bowel lesion. Among the dangers thus induced, none causes more anxiety, or more gravely affects our prognosis, than the extreme abdominal distension with which in severe cases we every now and then have to deal. A moderate amount of tympanites is a common symptom, and does not call for special treatment, but in severe cases it may become immoderate; the abdominal distension may be so great as to not only cause considerable distress, but, by its upward pressure on the diaphragm, to materially increase the danger of an already sufficiently grave illness. What adds to the gravity of this complication is the fact that it comes on late in the case, when the patient is already pulled down by two, three, or more weeks of fever. The condition essentially consists in great distension of the large bowel. Sloughs and sloughy discharges from the lesion in the small bowel have been slipping through the ileo-colic valve into the cæcum. As a rule, the diarrhœa which accompanies the process leads to their early discharge by stool; but they may be detained in the cæcum or colon, or if very abundant may not be got rid of with sufficient rapidity to prevent the colon from getting distended by the gas formed during their rapid decomposition. The evil is constantly being added to by the descent of sloughs and putrid discharges from the ileum, and by-and-by the bowel gets paralyzed from over-distension. The condition is not unlike that which has frequently to be dealt with in the case of the bladder; and, as in these cases of bladder distension in the typhoid state, a certain amount of urine may dribble away, occasionally leading the attendants to think that the bladder has been relieved, so in the cases of destended bowel a certain amount of flatus and fluid may pass away without any real relief being given. So long as the muscular coat of the bowel retains the power to contract the danger from distension of the colon is not imminent, and relief may be given by the administration of a stimulant enema—tupentine, carbolic acid, etc. But the distension may be so great as to paralyze the muscular coat of the bowel. Under such circumstances no enema can make the bowel act; and from sueh treatment no good, and possibly harm, may result. When such a point is reached the patient is in imminent danger. The colon may become, from absence of the usual resistance of its muscular coats, very rapidly distended; such distension, besides causing much distress, produces pressure on the diaphragm, impeding its action, and embarrassing that of the heart and lungs. Such pressure, if not relieved, is likely to cause death; for be it borne in mind, it occurs only in the advanced stages of bad cases in which the typhoid state is marked, the cardiac systole feeble, and in which the addition to the already existing troubles of any other complication readily turns the scale against the patient.

Such extreme distension of the colon, with its attending dangers, may be developed very rapidly. It calls for prompt treatment. To give enemata is useless; for the muscular coat of the bowel is so distended that it cannot act. Nay, it is worse than useless; for it is only adding to the contents of an over-distended bowel. There are only two ways of giving relief—to tap the colon by a fine trocar, or to pass a long tube into it by the rectum. The former proceeding, though attended with very little danger, cannot be said to be free from risk. The passing of a long tube up the bowel is not only void of all danger, but, as a means of relief, is much more speedy and efficacious; for not only does the flatus pass away more readily and freely through the tube than through the cannula, but there passes away with it much of those putrid and sloughy contents of the bowel, whose retention and decomposition cause the whole mischief. The following cases illustrate the beneficial effects of this method of treatment.

CASE 1.—A gentleman, aged thirty-six, of full habit and previous good health, had a severe attack of typhoid fever. Tympanites became a marked symptom early in the third week, and by the eighteenth and nineteenth days it was sufficiently great to increase the patient's restlessness and to cause some anxiety. Enemata of turpentine had been given without affording any relief. On the twentieth day there was great distension of the abdomen, the skin being quite tight; the patient was wandering and very restless; breathing was short and hurried, 42 per minute, pulse 120, feeble; temperature 103·4°. The tongue was dry in the centre; there was slight hiccough. A little dark-colored fæcal discharge, with some flatus, was passed involuntarily in bed. Nourishment and brandy were taken frequently and in small quantity, and were occasionally rejected. The patient was in much distress and in imminent danger. A long tube was without difficulty passed into the bowel; there at once passed away a large quantity of flatus, and about a pint of dark-colored liquid, fæcal matter, having scattered through it a number of shreddy particles, evidently the remains of sloughs. The patient seemed much relieved. Half an hour after it was noted that he was quieter and much less restless, the abdomen was less tensed, the respiration had fallen to 36, the pulse was 116, and the temperature had drop-

ped to 102·2°. This was at 4 p.m. At 10 o'clock the temperature was a 102·8° ; pulse 116 ; respiration 36. The tube was again passed ; a good deal of flatus and a small amount of dark fluid again coming away through it. The patient passed a better though still restless night. On the following morning there was some return of the abdominal distension and the restlessness, though neither was so marked as before ; the tube was again passed with the like result, a large quantity of flatus came away, followed by nearly a pint of dark fluid fæces with sloughy shreds scattered through it. For several days the tube was passed three times a day ; by this means the distension was kept down, the bowel was relieved of its offensive contents, and the patient was freed from the most pressing danger. Coincidently with the relief thus afforded there took place an improvement in his general condition. The pulse, temperature and respiration all fell after the tube was used for the first time, and never again rose to the same point ; hiccough ceased entirely, and the patient retained all his nourishment. On the twenty-ninth day of the fever there was a marked fall of the temperature and a little all-round improvement ; the abdomen was less full ; the expression was improved ; the tongue was moist all over. On the thirtieth day the improvement was maintained, and on the morning of the thirty-first day the temperature reached the normal. From this time progress was uninterrupted.

Case 2—Miss L—, aged 20, had a severe attack of typhoid, with all the symptoms well marked. In the fifth week of the disease the abdominal distension, which had been a sufficiently noticeable feature for some time became rapidly very great, and the patient was extremely distressed and apparrently sinking. When I saw her there was great distension of the abdomen, the skin of which was quite tense ; the patient was prostrate and wandering, restless, and breathing in a distressed and irregular manner, about 44 per minute ; the pulse was 128, feeble ; the temperature 103 9°. She was evidently suffering from pressure on the diaphragm. There was no long tube at hand, and matters were urgent, so I cut the valvular extremity off from the tube of a Higginson's syringe, and introduced the tube into the bowel as far as the ball. There passed away a great quantity of flatus with about a pint of dark liquid fæces with a number of sloughy-looking shreds floating about in it. The patient was at once much relieved ; she became less restless, the respiration dropped to 36, and became more regular, the pulse improved, and the temperature fell to 102°, a fall of nearly two degress, within an hour after the passage of the tube. A proper tube was obtained, and passed several times daily for nearly a week. The patient slowly improved, and made, after a long time, a perfect recovery.

Case 3—A young man, aged twenty-three, had much abdominal distension in the third week of attack of typhoid. On the twenty-first day there was extreme distension and great prostration, with muttering delirium, dry tongue, feeble pulse, and a temperature of 104·1°. The abdominal distension had rapidly increased, and its increase was accompanied by a corresponding prominence in the urgent symptoms. He was restless, muttering, very prostrate, and rejected all nourishment. A long tube was passed into the bowel. There at once came away a large quantity of flatus and dark-colored fluid fæces, with here and there shreds of sloughy-looking matter scattered through it. All the urgent symptoms were distinctly relieved, the temperature in half an hour fell to 103·2°, nourishment was again retained, and he slowly gained ground, though the tube had again to be used on several occasions. The abdominal distension never became again a source of anxiety ; but the case continued in rather a severe form till the patient died of perforation on the twenty-ninth day of disease.

In the first and second cases I believe that the timely passage of the tube saved the patients lives, for in neither could the pressure on the diaphragm have gone on for many hours longer without causing death. Many cases there are, of course, in which the passage of the tube, though it relieves the urgent symptom for the relief of which it was used, cannot save the patient from the other dangers of the disease. By relieving the pressure on the diaphragm, however, it saves him from that danger, and gives him one more chance of life. Case 3 illustrates this.—Dr. McLagan, in *Lancet.*

THE ANATOMY OF THE THORAX AND LUNGS IN RELATION TO CERTAIN POINTS IN PHYSICAL DIAGNOSIS.

BY J. WEST ROOSEVELT, M.D.

Although so much has been said and written about physical signs and their causes, great difference of opinion exists in regard to the subject. If ever it be possible to establish physical diagnosis upon a rational basis, this basis must rest upon anatomical study. Both the anatomist and physiologist usually look upon the thorax and lungs from a point of view so different from that of the physical diagnostician, that their studies are of little value to him. The first is apt to be too much interested in details of structure, the second in questions of functions. The physical diagnostician, must regard the anatomy and physiology of the chest as he would the component parts and action of a piece of machinery, any disarrangements of which can be appreciated by the senses.

As most of the derangements are appreciated by the ear, the acoustical properties of the thorax are of much importance.

In this paper I regard the thorax and lungs purely from this mechanical stand-point. I venture to bring forward the subject not so much that what I have to say is new, but because I believe it to be true. Every sign mentioned has been observed by myself, and the anatomical statements are based upon dissections, corrosion preparations, or sections made by me. I do not know that any observation is original; I know that many are not. I have tried to study objectively—to see what *is* not what has been said to be. How far I have succeeded I do not know. I hope that, at least, I may present some of it in a new light. This is my only excuse for writing.

Much of the confusion regarding physical signs has been caused by the use of incorrect diagrams. The usual diagram of the air-vesicle and terminal bronchus, for instance, is preposterous. The average diagrams representing pleural effusions are absurdly incorrect. Both have had their influence in producing false ideas of physical diagnosis, since they gave false impressions of the mode of production of physical signs. This is no theoretical matter. A man who does not have a clear idea of physical conditions cannot progress in the study of physical signs. He who thinks that bronchial breathing necessarily indicates consolidated or compressed lungs, or cavernous breathing a cavity, as many diagrams would tend to show, is not a trustworthy interpreter of pulmonary signs. The same is true, in lesser degree, of one who supposes that the level of pleural effusions is always horizontal when the patient stands, or that it usually shifts when the patient lies down, or that absence of evidences of change of level with the patient's change of position indicates pleural adhesions, or that the lung is under actual pressure from fluid save when the quantity is very great, or, finally, that the lung is compressed or contracts directly and symmetrically toward its root when fluid is present.

The air-vesicles do not in the least resemble the usual diagrams. Active pressure upon the elastic lung, until fluid is very abundant, is, as Garland has shown, impossible. The same author has demonstrated why the fluid level does not always change with change of posture. That the lung cannot contract toward its root is evident when one looks at the *ligamentum latum*. Yet all the ideas mentioned are common.

The Air-vesicles.—In regard to the anatomy of the lungs, for the present purpose we are mainly concerned with the bronchial and vesicular portions. The former is better understood than the latter. The description which follows is the result of much study of corrosion preparations. It corresponds with that of Delafield, in his "Studies in Pathological Anatomy." This description (of Delafield's) had been generally discredited. Among others who doubted its accuracy was the writer of this paper. A good deal of work has convinced me that Delafield's view is correct. It may be said that there are two different ideas in vogue regarding the anatomy of the pulmonary lobule; some regard the air-vesicles as attached to the terminal bronchi like a raspberry with its interior hollow. Hence many time-honored diagrams representing fine *râles*. Others give a more elaborate description of infundibula, etc. When one looks at perfectly injected cast of ultimate bronchus and air-vesicles (which looks like a berry), and breaks it up (observing it with a low-power lens), it becomes evident that the interior of the berry is made up of spheroidal bodies which are attached to one another at two or more points. These are the true air-vesicles, and the important point for us in Delafield's account is that these vesicles communicate freely with one another. This they do, since it is possible to break off a number together, and then, by further breaking, to show that there are many which present corresponding rough surfaces at the line of fracture. Delafield further points out that the bronchi enter the lobules in an irregular manner, sometimes from the side, sometimes from the distal end, etc. It is perfectly easy to reconcile the two other descriptions if this view be adopted. Kolliker, Klein, and others describe imperfect injections. Those who are responsible for the usual diagrams, probably studied well-injected specimens imperfectly broken up, and also sections of lungs which seem to bear them out. Delafield describes "air-passages" which, he says, "seems to be made up of a succussion of large vesicles opening into each other, or of an irregular, large canal, made up of vesicles into which other vesicles open from all sides. These air-passages branch and anastomose. . . . They are given off from the ends of terminal bronchioles, or from the sides of small bronchi" ("Studies in Pathological Anatomy," vol. i., p. 102). In Delafield's "air-passages" we have, "the infundibula," the "respiratory bronchioles," and the terminal bronchi with vesicles opening into them. The main fact which Delafield demonstrates is the communication between air-passages.

The Bronchi and Blood-vessels.—The bronchi divide and subdivide, until finally the ultimate bronchioles terminate in the branching and freely communicating air-passages and vesicles. This arrangement exposes a very large surface to the air in the lobules; it also makes room for much elastic tissue, and it must cause a very great amount of motion in the air within the lobules and bronchioles with the respiratory movements. It is interesting to note that the bulk of the air-vesicles is always greatest where the chest motion is

greatest, and that, as I demonstrated in this Society at a previous meeting, the bronchi and arteries run in such a direction that they tend only to lengthen and shorten in respiration.

The veins pursue a different course from the arteries. They lie as far as possible from the bronchi, while the arteries accompany these tubes. Their course also is more tortuous. They are surrounded by elastic pulmonary tissue, attached loosely to their walls. The mechanical advantage of this arrangement has not, I think, been pointed out. It is evident that the veins are so placed as to tend to be held open during inspiration and expiration, by the tendency of the elastic tissue to contract toward the bronchi. They are so placed as to be practically uncompressed by the atmosphere. In fact, they may be said to run always through those parts of the chest in which there is a nearly perfect balance between the contractile power of the lung and the atmospheric pressure.

Ewart, in his remarkable monograph, "The Bronchi and Pulmonary Blood-vessels," describes the course of the veins with the same exactness and detail which characterize the rest of his work. He views the veins, however, as a part of the pulmonary framework. In this he is, I think, only partly correct. He is right, as far as he goes, in looking upon the veins as part of the pleural and pulmonary connective-tissue system; but the vein only lies in, and does not form a part of, the sustentacular system, running in the latter because it is necessarily best placed, as far as possible from the centres of expansion and contraction of the lung. I cannot speak too highly of this work of Ewart. It fills a practically unexplored field of pulmonary anatomy with a thoroughness which leaves nothing to be desired. It has vastly simplified my own work, and rendered the publication of much of it needless. To it I am indebted for the first correct idea of the pulmonary vein. My view of the subject is purely mechanical, and Ewart's anatomical, hence we interpret differently.

The Attachments of the Lungs.—The structures forming the roots of the lungs are not so much concerned in holding the organs in place as is usually assumed. Far more important are the pleural folds known as the *ligamenta lata.* These broad ligaments are arranged in such a way as to fasten the lungs, for a considerable part of their inner surfaces, firmly to the vertebral column, pericardium, and diaphragm. Their folds are so separated above as to leave free room for the bronchi, vessels, etc., and so protect them entirely from injury or pressure during respiration. Except these broad ligaments, the rest of the pleuræ of the lung and thorax are interesting for our purposes in so far as they glide over one another.

The Thorax and its Contents.—The thorax is an expansible cavity, partly enclosed by rather rigid walls, composed of bone, connective tissue, and muscles, partly by the very elastic diaphragm. The cavity is divided into two compartments for the lungs by the mediastina and the pericardium contents. These structures make a fairly rigid column, attached above to the deep neck fascia, below to the diaphragm. The central parts of the latter are thus held nearly motionless at all times.

The chest moves in respiration in such a way as to enlarge or diminish every diameter (roughly speaking) in proportion to the bulk of lung-tissue lying between every part of each half of its surface and the main bronchus of the corresponding lung. The movements of the thorax cause not only expansion of the lungs, but also gliding of the pulmonary over the parietal pleura.

Every structure within the thorax, save the lungs, is subjected to a varying negative pressure by the elasticity of these organs. During inspiration this pressure is of course most marked. It is this which causes the diaphragm to arch up and the intercostal spaces to curve inward. It is this which determines the position and shape of fluid masses in the pleural cavities, and the displacements of viscera in pneumo-thorax.

Fluid in the Pleural Cavities, as is beautifully demonstrated by Garland in his paper on "Pneumono-dynamics," does not assume a "hydrostatic," but a "hydrodynamic," level. That is: because of the negative pressure of the lungs, the surface of the fluid is made to take a peculiar shape. It is not level, as it would be under the influence of gravity alone, but is drawn up so as to apply itself to the surface of the contracting lung. The line of flatness at the fluid-level is not straight, but curved. Moreover, the same negative pressure may prevent any great change in the fluid-level with change of posture. Garland illustrates these facts by means of simple and ingenious apparatus. He also calls attention to the fact that active compression by fluid of an elastic body like the lung is impossible, until the elasticity of that body is overcome. The fluid allows the lung to contract, does not press upon it until the chest is very full and the contractile power of the lung exhausted. Of course, as far as the effect upon the blood circulation and air movement within the lung is concerned, it does not make any difference whether the elastic tissue contracts, or the fluid compresses it; but it is very important to remember that, until this negative pressure ceases, the intercostal spaces will continue to be depressed, and the abdominal viscera will not be much displaced. Not so with the heart, since the elasticity of the lung on the sound side produces a negative pressure which causes its displacement toward that side when fluid is present in too small quantity to do so.

All this is so obvious, when once stated, that it is needless to discuss it. The position assumed by the lung when actively compressed by fluid, or

when pneumothorax allows it to contract, is usually entirely wrongly shown in diagrams, and is misunderstood by many writers. It is a common idea that the lung under these circumstances contracts towards its bronchus. This is not so. Held by the broad ligament, it contracts so that (unless there are old, firm adhesions) it lies along the spinal column in the vertebral groove. That this is the case can sometimes be demonstrated during life by pretty hard percussion, which will show dulness near the spinal column from about the spine of the scapula to the bottom of the chest, while flatness will be found everywhere else in cases where there is a great amount of fluid. In some cases in the same region the subcrepitant râle is heard. Post mortem the lung is usually found in this situation if the contraction or compression is sufficiently marked. If not, the position of the lung is partly determined by its elasticity, partly by its attachments, and partly by its power of floating because of the air contained in it. These various factors modify the physical signs.

Physical Signs.—I shall speak only of a few physical signs, and the probable mode of their production, since this paper is already very long. It is necessary to define some terms for the sake of clearness. On percussion, we find over different parts of the normal chest and abdomen, in different cases, pulmonary, tympanitic, or vesicular resonance, with certain modifications thereof, as tubular resonance, flatness, bony resonance, the cracked-pot sound, and certain combinations or modifications of the above, as vesiculo-tympanitic resonance, and dulness. Pulmonary and tympanitic resonance, with their modifications, and in the cracked pot sound, flatness, and bony resonance, have each one distinguishing feature, namely, quality.

Dulness has none. It is merely some type of resonance modified more or less, usually by an increase of the flat tone which is always audible to trained ears in any percussion-note. No absolutely pure percussion-note save flatness exists. By flatness is meant what is sometimes called "absolute dulness," namely, the note obtained on percussion over the thick muscles of the thigh, or over a large fluid accumulation in the chest or abdomen, etc. This note is high-pitched, short, and pf little intensity, and of a quality called flat. It is impossible to describe sound quality. When anyone can describe the taste of potatoes, possibly he can describe the quality of a sound. Neither of these things has yet been successfully reduced to writing. I believe, as has been said, a flat, short, high-pitched tone always accompanies any other type of percussion-sound. It is produced by the pleximeter and the solid tissues which cover the organs producing the more pronounced sound. Dulness is produced when this flat note becomes more, while the pulmonary note becomes less, intense. It is difficult to distinguish, in all cases, a rise in pitch from a change in quality. Where the lungs, for example, cover with a thin wedge-shaped edge the liver, the pulmonary note certainly rises in pitch. It is also duller, and to the writer this dulness seems due to a change in quality produced by diminished pulmonary, and increased flat, tone.

Flatness is a tone possessing an absolute quality, but not an absolute pitch. In pulmonary and tympanitic or any other resonance the quality is not pure.

In percussion it is well known that the direction of the blow changes greatly the resulting note. It is not, however, usually appreciated how great a range of notes may thus be obtained. In the intra-clavicular region of healthy adults the writer has frequently obtained notes running through one-fifth and even one-sixth of a musical scale, simply by directing the blow toward the trachea, then gradually more and more backward, then toward the external wall of the chest; the pleximeter always being held in the same position.

Pulmonary or vesicular resonance is heard over a large part of the normal thorax. It is a tone whose predominating quality is produced by the cavity of the chest with the contained sponge-like lung. It is produced neither by the air-filled lung alone nor by chest cavity alone. The former produces a much lower-pitched and feebler, the latter an amphoric or tympanitic note. The spongy lung dampens the thoracic tone, and the thoracic cavity, with, to a certain extent, its walls, resound with the lung, and together they produce what we call pulmonary resonance. The pitch of this resonance varies with the elasticity of the chest-wall and with the size of the thoracic cavity. A large chest usually gives a deep tone. A smaller, elastic one does the same. The note of a large chest is, I think, of greater volume or intensity than that of a smaller, elastic one.

Bony resonance is heard over the sternum, and in some cases, especially in old people, over a large part of the chest. It is interesting to note, in connection with the statement that dulness is usually a mixed tone, that the heart produces on gentle percussion a dull note where it lies under the sternum, but on stronger percussion, when the force of the blow causes the whole bone to resound, it obscures the flat heart-sound.

Tympanitic resonance is produced by hollow viscera, by consolidated and compressed (or contracted) lung, and by cavities in the lung.

In all cases save those in which this note is heard over solidified, contracted, or compressed lung, its mode of production is sufficiently clear. In the latter cases, so far as I know, the quality and pitch of tone is always the same as that produced by percussing the trachea, if the upper part of the chest gives it out; if the lower, either this note or that of the abdominal viscera. It has been

suggested that the contracted lung over fluid is in a physical state resembling hollow viscera, and produces a note more by the vibration of its contained air than the mixed tone of its air and its stretched pulmonary connective tissue, etc. Possibly this is so. As far as I have observed, however, it has seemed to me that the note is identical with that of the trachea and large bronchi, or abdominal viscera. In children, the relatively large size of the bronchi and trachea compared to the vesicular part of the lung, together with the very elastic chest-walls, makes the occurence of this note, under the conditions we are considering, very common.

The cracked pot sound is heard frequently beneath the clavicles of healthy children, as well as over cavities, consolidated and compressed or contracted lung, and in pneumothorax. The fact that it is heard so often over normal lungs in the infraclavicular region in children throws, I think, much light upon the mode of its production. The walls of children's chests are elastic, the bronchi and trachea relatively of large size. The sound is best heard when, the mouth being opened, a rather heavy blow is struck, the plexor being allowed to remain upon the pleximeter. This annuls, as far as may be, all thoracic vibration. The blow is really a pushing one, which is calculated to compress the lung and drive a good deal of air into and through the large tubes, larynx, and mouth; this causes the sound. It may be fairly imitated if, when a patient whispers, the chest be suddenly squeezed just as a word is being uttered, both hands of the observer having been placed over the lower ribs. In the case of consolidated lung, or lung over fluid, is it not probable that precisely the proper degree of elasticity may, in some cases, obtain to admit of drawing air out in a similar way? In pneumothorax also, with free opening into a large bronchus, and in some cases of cavity, this explanation seems reasonable.

Precautions to be observed in Percussion.—Probably many good auscultators exist for one good percussor. The note obtained in percussion is often very complex and difficult of analysis, the more difficult being of short duration. Pitch and quality are hard to separate. Moreover, percussion is usually badly taught by instructors. Not to weary you with the well-known advice regarding the mode of striking, etc., and the necessity of striking a quick blow, I wish to call attention once more to the great need of comparing the results of lighter and heavier blows, and also of examining the patient standing, and with the body naked when possible. I wish also to emphasize the value of the much-neglected study of the sensation conveyed to the finger used as the pleximeter. By this finger the sensation of resistance will often give a better idea of the level of fluid than the ear. In children's chests the sensation is of especial value, since their elastic chests often give notes from both sides. It is, moreover, remarkable what slight differences of pitch and quality may thus be appreciated.

Auscultatory Signs.— Bronchial Breathing. — There is no doubt that this sound is produced by the air-currents in the larger bronchi and trachea, and possibly the larynx, nose, and mouth. It is heard normally over the trachea, the sternal notch, and upper part of sternum, and sometimes in the vertebral region near the scapular spines. It is also usually heard over consolidated and compressed or contracted lungs (especially, in the latter case, at or near the level of fluid, and sometimes below this level), over cavities, and over tumors (including aneurism) pressing upon the larger bronchi.

Its characters need no description, but, for reasons which will appear later, I wish to remind you that in it there is a pause between inspiration and expiration, and that expiration is prolonged and higher-pitched than inspiration. In cases of consolidation (as pneumonia), it seems probable that the solidified lung conveys sound better than the normal lung, and therefore is much like a stethoscope applied directly to a bronchus. The usual propagation of this sound at or near the level of fluid is explained, partly by the fact that here we have practically solid lung, and partly, probably, by the reflexion of the sound from the fluid. The absence of all sounds in most cases below the fluid-level is probably due to the fact that, though sound travels well through liquids like water or serum, or through solid tissues like compressed or solidified lung, it does not readily pass from solid to fluid media, or *vice versa*. Thick masses of fluid, therefore, usually prevent its transmission from the lung, while the contracted lung, at and near the fluid-level, forms a good sound-carrier.

It remains to speak of two conditions: where there is absent breathing over solidified lung, and where there is bronchial breathing below the level of fluid.

Absence of breathing over solidified lung may be found where the whole or a part of a lung is involved. In the former case it is possible that practically no air enters or leaves the larger tubes. In the latter, possibly a plugged bronchus may account for the phenomenon; possibly at times the consolidation is of such character as to transmit sound badly, resembling more or less in physical character œdematous exudate. Possibly in some cases the diminished movement of the affected chest may explain it.

Bronchial breathing is often heard below the fluid-level in adults with a very full chest, and in children. In the latter the relatively large size of the bronchi seems to explain the fact. In the former, with over-full chests, the fluid and compressed lung together are practically like consoli-

dated lungs, forming a good medium for sound transmission. The fluid pressing upon the lung-tissue is like the stethoscope pressing upon the chest-wall. The bronchial sounds go through it in the same way. Vocal resonance is carried in a similar manner, but vocal fremitus with its larger waves is checked by the fluid (probably because of the inertia of the latter).

The vesicular murmur, or normal pulmonary respiration, has been the subject of much dispute. As this paper is already too long, I shall only speak of a few points in regard to it. First, unlike bronchial breathing, its expiratory sound is lower pitched than the inspiratory, and there is scarcely any pause between the two. Second, both in pitch and quantity, both sounds differ from the bronchial type. Third, it is absent when from any reason air does not move in the vesicles, and the latter, therefore, do not dilate or contract. Finally, the murmur is no more distinct in places where there is most movement of the pulmonary over the costal pleura (*i. e.*, over the anterior lower parts of the chest). The sound can, therefore, not be due to pleural movements.

Now, this murmur might conceivably be the bronchial note modified in its transmission through the lung tissue; but if so, the modification is certainly peculiar, since it fills in the pause between two sounds, lowers the pitch of one relatively to the other, alters the absolute pitch of both, and utterly changes the quality of both. Moreover, if the sound be simply transmitted and altered, the plugging of a bronchus or other obstruction to vesicular movement should not abolish it. Recent experiments (which are rather crude), made upon lungs removed from the body, show that this murmur may be heard when all bronchial sounds are annulled, by introducing a loose cotton plug into the trachea.

The vesicular murmur must be produced in the lobules of the lung. The air-currents and the elastic tissue of the lung, or both, may cause it. That much motion of the air in the lobules, and therefore of the walls of the vesicles, occurs, cannot be doubted, if one considers the relative bulk of the vesicles to the bronchi, the position and direction of the latter, and the thoracic movements. The air rushes through narrow tubes into and from much larger passages. In so doing one would expect it to cause a sound. The expanding and contracting vesicular walls also, like any elastic substance alternately made more or less tense, must do the same. One or both of these must be the cause.—*Med. Rec.*

IT has been shown by Bastian that complete transverse section of the spinal cord abolishes the reflexes of the lumbar enlargement of the cord, instead of increasing them.

PHSIOLOGICAL ACTION OF CHLOROFORM.

Professor H. C. Wood, conjointly with Dr. Hare, has communicated a paper upon Phsiological Action of Chloroform to the American *Medical News* of Feb. 22nd. The authors criticise the work of the Hyderabad Commission, and are led to adopt very different views concerning the action exerted by chloroform upon the heart. Moreover, they take exception to an observation made by us in the *Lancet* of Jan. 18th, p. 139. We said in speaking of the Hyderbad Commission: "The practical outcome of the research would appear to be that deaths are not inevitable. They are therefore preventable, and by due care in its administration they may be certainly avoided." Professor Wood and his collaborator do not appear to recognize that in using the above words we were expressing the conclusions of the Commission rather than our own. We were careful to add: "The conclusions of the Commission are sweeping, and without abundant evidence cannot be accepted."[1] We have spoken with no uncertain sound from time to time concerning the dangers attending the use of chloroform, dangers which unquestionably in temperate climes manifest themselves through the heart. A careful perusal of the report of the Commission will, we think, amply justify us when we assert the outcome of its teaching is that heart failure does not occur, and deaths are, if ordinary precautions are adopted, quite preventable. We may, however, quote the final word of the Commission in confirmation of this. It says (the *Lancet*, Jan. 18th, p. 159): "The Commission has no doubt whatever that if the above rules be followed, chloroform may be given in any case requiring an operation with perfect ease and absolute safety, so as to do good without the risk of evil." The rules, we may remark, are simply those which every competent chloroformist has, since the days of the English Chloroform Committee, known and practised. But the really important part of Professor Wood's paper is that in which he narrates his own experiments. The work of Professor Wood, as that of a tried and skilled experimenter, and one who has investigated the action of chloroform upon the heart more than once, must command the utmost attention. In reviewing modern physiological research on this subject, he justly says it is unanimous in averring that chloroform given diluted to the lower animals kills *qua* the respiration—i. e., as Snow has well explained, by cumulation; given in concentrated vapour, it kills by provoking paralytic arrest of the heart. This result also obtains when chloroform is injected. The heart, further after this arrest, is found relaxed and incapable of responding to stimulation. Professor Wood states

this result is so constant that he has repeatedly demonstrated it before his class. It has been the custom to destroy dogs in the laboratory by chloroform, and Professor Wood has "often noticed that death has been produced by primary cardiac arrest." Although possessed of these facts as the result of several years' work in the laboratory, it was determined, upon the publication of the Hyderabad Commission's report, to reinvestigate the matter. This was done with the result that Professor Wood became more than ever impressed by the fact that chloroform can and does kill directly through primary arrest of the heart. One series of expermiments went to show that the heart is *directly affected* and not reflexly, the view now commonly held by experts. A second series proved that although when large doses are given respiration and the heart's action may cease synchronously, yet frequently the cardiac action ceases a perceptible period before the respiration comes to a standstill. The conclusions founded upon these experiments are well worthy of very careful consideration. The authors say "chloroform acts as a powerful depressant poison upon both respiration and circulation : sometimes the influence is most felt at the heart, and death results from cardiac arrest ; in other cases the drug paralyses primarily the respiratory centres, while in other instances it seems to act with equal force upon both medulla and heart." And, further, they are led to formulate "that cardiac arrest is specially prone to occur when chloroform is administrered rapidly and in concentrated form in the human subject in which the heart ceased some while before arrest of respiration took place. They suggest that if the report of the Hyderbad Commission is not materially modified in its main contention—viz., that chloroform does not cause primary cardiac arrest—the explanation may be found in some peculiarity of Indian pariah dogs, since European and American dogs unquestionably succumb to primary heart failure when allowed to inhale an unduly strong chloroform vapour.

In the *Lancet* of Sept. 21st, 1889, we made the same suggestion as Professor Wood does now, and pointed out the possibility of the animals experimented on in Hyderabad being pecularily resistant to the action of chloroform, and also indicated that differences in resisting power might also exist between the inhabitants of different cities. We further indicated variations in temperature as another possible cause of difference in the results of chloroform administration. There may be other factors still unknown, and which may be ascertained by further experiment. We have no doubt that the experiments of the Hyderabad Chloroform Commission and those of Drs. Wood and Hare were made with equal care, and the apparent discrepancies between the results will in the end only lead to a fuller and more perfect knowledge of the truth. But we have foreseen that it is quite impossible to come to a final conclusion regarding the action of chloroform on man from experiments, however numerous and however careful, on the lower animals. Such experiments are of great value, but the question must also be worked out from the clinical side, and it is for this reason that we have sent out a request for information regarding the results of the administration of anæsthetics. We trust that the difficulty of arriving at exact conclusions without a very large basis of facts will induce all those who can give us information to do so as fully as possible, and also to remember the proverb, "*Bis dat, qui cito dat.*" When we have recieved these returns we purpose to them collated and to devote careful consideration to the whole question of the action of anæthetics, from its clinical as well as its experimentl side.—*Lancet.*

MEDICAL NOTES.

For *œdema of the vulva* during pregnancy, Prof. Parvin directs that numerous punctures be made.

Pharmaceut Era, Feb., 1890, suggests the following *Dandruff Pomade* :

℞.—Acid. salicylic., ... gr. xxx
Sodii borat., ... gr. xv
Balsam Peru., ... ♏xxv
Olei anisi . . . . . gtt. vj
Olei bergamot., ... gtt. xx
Vaselin., ... ℥ vj—M

The following is suggested as an injection in *Gonorrhœa in the Female* (*Jour. de Med. de Paris*, Dec. 1st, 1889) :

℞.—Creolin, ... ♏xxx
Extract. hydrast. canad., . fʒ iiss
Aquæ, ... fʒ viij.—M

Sig.—Add a dessertspoonful to a pint of water, and use as an injection.

In the treatment of *Chronic Gonorrhœa*, Dr. Breima (*Riforma Med.* in *Med. News*, Feb. 15th, 1890) recommends the following injection :

℞.—Creasot . . . . . ♏x
Extract. hamamelis fluid.,
Extract. hydrast. canad., āā ♏xv
Aquæ rosæ, ... fʒ iv. M.

This should be slightly diluted with warm water before using.

Dr. S. Cohen gave the following as a pleasant form of *diet* in cases where milk was being used :

Completely peptonized milk, 4 oz.
Juice of one lemon,
Sugar, ... ½ oz.

To be placed on ice until cold ; is then ready for use.

In treating *obstruction of the nose*, quinine and belladonna or cocaine will relieve the congestion; the patient also should snuff up the nose a mixture of camphor and boric acid; a cold bath to be taken each morning, to prevent taking cold. Dr. Jurist.

Prof. DaCosta, for a case of *muscular rheumatism*, prescribed as follows: Dry heat to part, and Dover's powder with nitrate of potash. Should the case linger, give colchicum and potassium iodide. In the more chronic cases, give:

℞.—Morph. Sulph., . . . gr. $\frac{1}{6}$
Atropine, . . . gr. $\frac{1}{80}$.—M.

To be given hypodermatically.

Prof. Parvin directs the following in cases of *threatened eclampsia* in pregnancy; a purgative pill—

℞.—Extract aloes,
" colocynth, āā gr. ¾.—M.

To be given frequently enough to keep the bowels freely open; also a hot bath each day, with a glass of hot water to be drunk while in the bath. After the hot bath, the patient must be put to bed, and wrapped in blankets. Milk diet.

Prof. Parvin made the following remarks upon *dysmenorrhœa*, while treating a young woman for this affection before the clinic: Frequently in young women, dysmenorrhœa disappears at puberty or soon after, with full development of the uterus. Exquisite sensitiveness of the internal os, is an indication for dilatation. Relief by dilatation, is not from the fact that the os is made larger, but the sensitive nerves are stretched. Or if dysmenorrhœa result from a uterus under size, with great sensitiveness of internal os, then antipyrin, five grains every hour for six hours, or sodium salicylate, gr. xv to xxx, every four hours. Antipyrin seemingly lessens the flow.

Dr. Von Harlingen treated a clinic patient with *acne*, as follows: Apply sapo viridis and rub in with fingers, then thoroughly wash away all the soap and apply starch. If the sapo viridis be left in for a long time, it will cause inflammation of the part.

In a case of *endometritis* with the following history, Prof. Parvin pulled down the uterus with a tenaculum forceps, curetted, and made applications of Churchill's tincture to the lining of the uterus. Woman thirty-six, married, three children, four miscarriages, menstruation at times very profuse, leucorrhœa, pain in inguinal and lumbar regions, patient quite weak.

For a case of *menorrhagia*, Prof. Parvin prescribed as follows: Rapid dilatation, application of Churchill's tincture, after pulling down the uterus with the tenaculum. The operation under ether. —*Coll. and Clin. Rec.*

THE SONG OF THE KNIFE.

With fingers weary and worn,
With eyelids heavy and red,
A student sat, in a student's gown,
Dissecting a neck and a head.

Work, work, work!
While the cock is crowing aloof,
Work, work, work!
Till the cats run over the roof:
Oh! worse than any slave,
Dissections are things I shirk,
The student has not a soul to save,
If this is Christian work.

Work, work, work!
Till the brain begins to swim:
Work, work, work!
Till the eyes are heavy and dim.
Vein, and muscle and nerve,
Nerve, and muscle, and vein,
Till the arteries all get running about
Like cobwebs over the brain.

Oh! examiners dear,
Men with money and wives;
It's not the patients you're wearing out,
But lots of students' lives:
And the fees they are so rough,
Twelve and sixpence at a go:
Oh, that human flesh should be so dear,
And human minds so low.

I wish we were more like death,
Mere phantoms of grisly bone:
It would not take more to read them up
Than a single night at home.
Cut, cut, cut!
And now I lose all reserve,
And slit at once, with a single slash,
A vein as well as a nerve.

Work, work, work!
My labor never flags,
We are always either cutting to bits
Or sewing up old hags:
And you know when I get home,
There are books on floor and chair,
That my shadow I thank,
As it seems to read them there.

Read, read, read!
From weary chime to chime.
Read, read, read!
As much as you can in the time.
Quain and Ellis, and Gray,
Gray, and Ellis, and Quain—
Till you get a heart, a liver a spleen,
All stuffed away in a brain.

Cut, cut, cut!
In the dark December night—
Dissecting gets very bad
When the weather is warm and bright
And just outside my rooms
A man falls into the gutter,
And so to show I know my work,
I go boldly out with a shutter.

Oh! but once to smell the breath
Of rum and whiskey neat,

With the stage upon the floor,
And the foot lights at your feet,
Oh ! for one short hour,
To feel as I used to feel :
Before I knew how, when bandaged up,
Babies will kick and squeal.

Oh ! for one short hour,
For just one little spree,
And forget that just a month to-day
The "College" is wanting me :
A little drinking would ease my heart ;
But in their sawdust bed
The bottles must stop, for every drop
Hinders the work, as I said.

With fingers weary and worn,
With eyelids heavy and red,
A student sat, in a student's gown,
Dissecting a neck and a head :
Cut, cut, cut !
Up men bereft of life :
Singing alone in a dolorous pitch,
And hoping examiners would never get rich,
He sang the Song of the Knife.

T. E., in *Hosp. Gaz.*

INFANT FEEDING.—In a paper read before the New York Academy of Medicine, Dr. A. Seibert makes a suggestion with regard to infant feeding which we think will be likely to prove of great value. His point is that the quantity of food given should not depend upon the age of the child, but upon its weight, as it is far more likely that the capacity of the stomach will be in relation to the size of the child than to its age, and the extent to which children of the same age can vary in size and weight is almost without limit. For a child weighing less than eight pounds he orders three ounces of food at a time ; the child to be fed every two hours during the day time, and twice during the night. When the weight is nine or ten pounds, four ounces should be given at a time, the intervals of feeding being the same. When between ten and fourteen pounds in weight, it may have five ounces at a time, and be fed five times during the day and twice at night. When weighing between fifteen and sixteen pounds, six ounces may be given at each feeding at the same intervals. When between seventeen and eighteen pounds, seven ounces may be given at a time, and it need only be fed once during the night. When weighing more than this, eight ounces would be given for each meal and at the same intervals. The proportion of milk is gradually increased from one in three to all milk at the last mentioned weight. To ensure the carying out of his method, he has had a series of bottles made of the different sizes and graduated to show how much milk is to be put into each. Full directions are given for sterilising the milk by steaming. The principle upon which Dr. Seibert acts appears to be sound, though perhaps it would not be wise to adhere too rigidly to all the details.—*New York Med. Jour.*

BATHS AND BATHING IN THE EAST.—From the very day of his birth every Japanese has a hot bath at least every two or three days, in most cases every day, and in many cases several times a day, usually at a temperature of 110° to 115° F., often as high as 120°, and sometimes 130°. Young girls may be seen stepping and sittng down into a bath that will scald one's fingers, and even babies that are too young to walk are dipped in the same. Europeans used to this dangerous habit have come to alter their opinion ; they, too, acquire the habit of enjoying a bath at from 110° to 120° F. The old fashioned and English notion that it is dangerous to go into a bath at a temperature over blood heat (say 98° F.) is declared, for instance, by Mr. Burton, to be like a good many other old ideas—an entirely mistaken one. He says :

"The ability to go into a bath at a temperature that would at first seem simply sufficient to parboil any human creature is easily acquired. It is only necessary to have a little perseverance, increasing the temperature of the bath by a degree or so a day. I have thus myself acquired the ability to go into a bath at a temperature of 120° F., although I much prefer one ten degrees less hot.

"One who has not tried it can have no idea how refreshing a very hot bath is, and especially in hot weather. One can remain in it for only three or four minutes at the outside ; there is none of the enervating effect that there is from the tepid or so-called 'hot' bath of England, but, on the contrary, a feeling of increased vigor.

"A thing I cannot understand is that, whereas in very cold weather the effect of a very hot bath is to so warm the body that one can sit in comfort for some two or three hours after coming from it, even in a Japanese room, without feeling the cold, in summer the effect is (from reaction, I presume) distinctly cooling."

Foreign medical advisers had, in virtue of their superior knowledge, induced the issue of an edict keeping down the temperature of public baths to 100° F., but this proved very distasteful to the natives ; and, moreover, the foreign medical advisers have come to see the error of their ways, and now themselves take baths at 100°, and find them agreeable, and, it is said, beneficial. Kusatsu is a famous mineral spring of a temperature of 54° C. (a little under 130° F.); that is, about the limit of enjoyable hot water, even for the inhabitants of the far East. Perhaps there is here a hint for our own physicians, and a subject for investigation.—*Br. Med. Jour.*

HYDRASTININE IN GYNÆCOLOGY.—In a late number of the *Therapeutic Gazette* Dr. Edmund Falk, of Berlin, gives an account of this new alkaloid, $C_{11}H_{13}NO_3$, which is formed, along with opianic acid,

by gently heating a mixture of hydrastine and nitric acid and preciptating with an alkali. The alkaloid itself is perfectly white and contains a molecule of water of crystallization, but its salts are free from it and most of them are readily soluble in water. The physiological action of the drug differs, it is said, very materially from that of hydrastine. It is not a spinal irritant, and is a heart stimulant instead of a paralyzer of that organ; it also sustains persistent contractility of the vascular system without the paralysis which has been known to follow the use of hydrastine Dr. Falk has made repeated demonstrations with hydrastinine, and suggests it as a remedy in the treatment of uterine hæmorrhages as being much more prompt and sustained in its action than ergotine. Report is made of twenty-six cases systematically and successfully treated with it. The twenty-six patients received in all four hundred injections of hydrastinine hydrochloride in the form of a solution varying from five to ten per cent. There was no noticeable local irritation following these injections at any time. The patients were unanimous as to the painlessness of the applications and the freedom from that subsequent discomfort which so often arises from the use of ergotine. The discoverer is making further investigations, the results of which are to appear in due course in the Archiv. fur Gynäkologie.—*N. Y. Medical Journal.*

RECIPE FOR CONTRACTING GONORRHŒA. — Should one desire to contract this malady, the following remedy will be found infallible: Take a pale, lymphatic woman, blonde rather than brunette, one with a tendency to leurcorrhœa; dine in her company, commencing with oysters on the half shell, followed by asparagus; drink dry white wine during the repast, finishing up with champagne and coffee; waltz afterwards with your companion until you are overheated. Take beer before retiring, and on awakening next morning, be sure to indulge in a hot bath and do not neglect a prophylactic injection. This programme, conscientiously followed, will induce the malady unless you are under the protection of special Providence.—[*Ricord.*] *Cincinnati Lancet-Clinic.*

CACTUS GRANDIFLORUS IN HEART DISEASE.—Dr. Orlando Jones publishes his experience of cactus grandiflorus, which he claims is likely to prove a useful adjunct to our resources, especially in asthenic conditions of the heart. Digitalis, strophanthus, and convallaria are not always reliable in the varied conditions of the heart with which we daily meet. The action of digitalis is not infrequently disappointing when we are dealing with a feeble heart, especially if that feebleness is excessive and of long duration. In such instances cactus grandiflorus may fill a gap where other remedies appear to be lacking. The action of this remedy seems to be the very opposite of that of digitalis, that is, in the final stage it strengthens the heart.—*Brit. Med. Jour.*

PERCHLORIDE OF IRON IN LEUCORRHŒA.—Of all remedies for simple leucorrhœa, the old tincture of perchloride of iron is the best, combined with hyoscyamus, opium, hop or Indian hemp, when the mucous membrane is in a state of irritation. Tepid or cold water injections, cold hip baths, etc., are useful local applications, with rest: and avoidance of occupations involving prolonged standing or pedal exercise.

Sometimes tannin, zinc, or alum are valuable additions to the injections. When the discharge emanates from the glands of the os uteri, local applications of belladonna and bicarbonate of potash are serviceable, two ounces of tincture and a teaspoonful of the alkali to about a pint of water.—ED. in *Pharm. Era.*

ONTARIO MEDICAL COUNCIL.

Want of space will prevent our giving an extended account of the proceedings of this body at its recent meeting. The chief points of interest are, however, summarized in our editorial columns.

The election of officers for the current year resulted as follows:—

President—Dr. Moore, Brockville.

Vice-President—Dr. Williams, Ingersoll.

Registrar—Dr. Pyne.

Treasurer—Dr. W. T Aikins.

The following gentlemen have been appointed examiners for the ensuing year:—

Dr. Grasett, Toronto—Anatomy, descriptive.

Dr. Saunders, Kingston—Theory and practice of medicine, therapeutical, general pathology.

Dr. W. J. Wilson, Richmond Hill—Midwifery, operative and other than operative, with puerperal and infantile diseases.

Dr. Anson J. Fraser, Sarnia—Physiology and histology.

Dr. Burt, Paris—Surgery, operative and other than operative.

Dr. W. Waugh, London—Medical and surgical anatomy.

Dr. Oldright, Toronto—Chemistry, medical, practical and toxicology.

Dr. A. McKinnon, Guelph—Materia medica and pharmacy.

Dr. W. H. Emory, Toronto—Medical jurisprudence and sanitary science.

Dr. C. O'Reilly, Toronto—Assistant examiner to the examiner on surgery.

Dr. E. Hooper, Kingston—Assistant examiner to the examiner on medicine and pathology.

Dr. F. D. Canfield, Kingston—Homœopathic examiner.

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AGENTS.—DAWSON BROS., Montreal; J. & A. MCMILLAN, St. John, N.B.; GEO. STREET & Co., 30 Cornhill, London, Eng.; M. H. MAHLER, 23 Rue Richer, Paris.

TORONTO, JULY, 1890.

The LANCET *has the largest circulation of any Medical Journal in Canada.*

THE FIRST MEETING OF THE NEWLY ELECTED MEDICAL COUNCIL.

The first annual meeting of the newly elected Medical Council of the College of Physicians and Surgeons of Ontario, met in the College building, of which the entire profession may well be proud, at 2 p.m. on Tuesday the 11th ult., according to notice. All the members, excepting Sir James Grant, were present. The first business done was to elect officers. The list of these will be found in another column. A Committee was appointed to strike Standing committees, and one to inspect the credentials of members—for in this as in larger bodies it is necessary to see that each member has been duly elected to his seat. The Standing Committees consist of one on Education—one on Registration—one on Rules and Regulations—one on Finance—one on Discipline—and a Property Committee. These committees having been appointed, the Council adjourned till next day (Wednesday) at 10 a.m. This adjournment is required in order that the several committees may be called together id begin work—for the principal work of the ouncil consists in receiving, discussing and adopt- g the respective reports of these committees—the ouncil modifying them in any way a majority of e members may direct. On Wednesday the 11th he Council met and did a good deal of routine nd other business. After discussing the Meerk- m prosecution case, it adjourned that the Committees might get to their work. W. Webb was re-appointed prosecutor for the Council.

Other business was done next day (Thursday) and the case of Jas. Cook Bright having been considered it was decided to leave it in abeyance for the present. The usual direction was given for calendars to be printed for the current year, 1890-91, which will contain a full and correct report of the business done throughout the session of the Council. A by-law was passed for levying the annual assessment, the amount being $2 per annum. The Council ordered the Registrar to ascertain, as far as possible, the conditions on which reciprocity with the various Provinces of this Dominion can be arranged for. The information so obtained is to be laid before the Council at its next annual meeting.

A by-law was passed appointing Drs. Day, Bray, and Logan, the Discipline Committee.

After doing a good deal of routine work at its morning and evening session, the Council again adjourned to meet Friday the 13th, at 10 a.m.

Resolutions referring to a variety of matters were, as usual, relegated to Committees, to be considered and reported on.

The Council, at its afternoon session on Friday, ordered the Registration Committee to prepare a code of ethics to be signed by all students upon receiving the license, and to present the same for approval at the next session of Council.

The Education Committee recommended very few changes to be made in the curriculum this year. Several of these being only slight verbal changes in the calendar. One was of consequence as marking the unanimous intention of the Council to prevent frauds of any kind by candidates at examinations by every means which can be employed. The regulation as it stood in the calendar, bearing on this subject, was as follows:

"21. Any infraction of the above rules will lead to the exclusion of the candidate who is guilty of it from the remainder of the examination; and he will not receive credit for any examination papers which he may have handed in to the Registrar previous to his being detected in such misconduct."

It was ordered that the words "and be debarred from further privileges at the discretion of the Council," be added to this regulation. It is gratifying that there have been but few cases in which fraud has been attempted, and it is due to good, honest students that parties capable of attempting

to cheat, should be promptly and severely dealt with, and it is the intention of the Council that they shall be.

A resolution regarding the matter of decreasing didactic lectures having been referred to the Education Committee, was considered, and it was decided to do nothing in the matter for the present.

It was recommended that the examiner in chemistry be directed to make the examination bear, as much as possible, on Medical Chemistry.

The list of Examiners for the coming year appears on another page of this number.

The report of the Finance Committee was adopted, and amongst other recommendations contained one, increasing the salary of the Registrar to $1800, which will be generally approved of, for it is no flattery of that gentleman to say, that he has well earned this increase, and that it would be by no means easy for the Council to obtain the services of a registrar who would discharge the many responsible duties of that office as well as these are discharged by Dr. Pyne.

On Friday, the 13th, the report of the Property Committee was adopted and was very satisfactory.

A resolution, having for its object the obtaining of useful information to be laid before the Council at its next annual meeting, was adopted. It is as follows:

"That the Registar be directed to place himself in communication with the authorities of the Canadian and British Universities and Canadian Medical Colleges, also to obtain the circular of the leading Universities upon the Continent of Europe, and that a committee be appointed to whom this information so obtained is to be submitted."

It was also resolved that the Council petition the legislature for power to increase the annual fee, and also for power to erase the names of parties from the register for non-payment of the same; their names to be reinstated, upon payment of all fees due. Yeas and nays demanded; 13 for, 4 against.

The case of Dr. B. H. Lemon was before the Discipline Committee and it was agreed that the proceedings in this case be staid until the next meeting of the Council.

The case of Dr. N. Washington was also considered and it was agreed that in consideration of a letter received from the said Dr. Washington and the promise therein contained, proceedings against him be suspended until the next meeting of the Council. The Council desire to have it distinctly understood that they do not thereby approve of the form of advertisement contained in Dr. Washington's letter, nor of any form of advertisements, nor of advertising.

In the case of John McKeown, owing to the fact that his whereabouts cannot be ascertained, he has not been served. The Registrar was instructed to have him served as soon as he is located.

Mr. B. B. Osler, Q.C., was appointed Solicitor.

It was also agreed that the Discipline Committee should be allowed the privilege of employing a Solicitor when required as in former years.

An Executive Committee was appointed consisting of the President, Vice-President and Dr. Henderson.

Dr. H. H. Wright was appointed Warden of the Council buildings and Custodian of the Council property, with the Property Committee as an Advisory Board.

The bylaw fixing the salary of the Registrar at $1800 per annum was passed.

The Credential Committee's report was adopted ordering an election to be held in accordance with bylaws, in the Malahide and Tecumseh division, and declaring Dr. Russell, of Hamilton, elected for the Burlington and Home, and Dr. Rogers for the Bathurst and Rideau Division.

A resolution of thanks to the Council officers and to the President was unamiously adopted and the Council adjourned *sine die*.

THE CURABILITY OF PHTHISIS.

Before the discovery of the specific nature of phthisis, the medical world sought, but sought in vain for some remedy to combat the ravages of this dread disease. Their remedies have been almost entirely empirical, as indeed, from the nature of the case, they must have been. It was known and recognized as a principle of treatment, however, long before the bacillus tuberculosis was demonstrated, that a patient suffering from consumption, who could eat heartily, digest and assimilate his food, was capable of being cured.

Since the acceptance of the microbic nature of the disease, medical savants the world over have sought, but again we fear we must say, sought in

vain, for a remedy which may be introduced into the lungs, and which will prove destructive of the living cause of the disease. Begeon's treatment by Co_2 introduced into the rectum, which created such a furore, and the benefits of which were attested by so many reported cases, has long since become a dead letter. The medical world was at the time considerably impressed by these reports, and not a little enthusiasm was evoked all over the civilized world by the thought that at last a means of escape from the disease had been found, and that based upon rational principle. Alas! the cold and relentless steel of every-day experience soon proved that Co_2 was—at any rate when adminstered by the rectum—powerless to destroy the silent workers in the pulmonary alveoli.

Quite lately, within the present year indeed, Dr. Hugo Weber has proposed to adminster the same remedy by the stomach. One would need to have a high order of belief in the miraculous selective powers of the Co_2 molecules, or a considerable degree of ignorance as to the habitat and life history of the germs of consumption, before he could convince himself that the said molecules can make their way from an effervescing mixture poured into the stomach, to the tuberculous masses in the lungs, penetrate them, and destroy the bacillus.

The absurdity of this plan of treatment will be apparent, when we consider that it is in close ill-ventilated and "mephitic" tenement-houses, city slums and alleys that this scourge is most at home, though there the amount of Co_2 is in excess, showing that it is no preventive of consumption.

The hot air plan of treatment, which is of later date, and which attracted many adherents, seems to have been proven, so far as the hot air is concerned, quite valueless. The idea originated in Germany a few years ago; Halter and Weigert being its founders, and is being carried out to a considerable extent in America at the present time. The theory is that the disease germs may be either destroyed, or rendered innocuous by a temperature slightly above that of the body; so that it only remained to heat them to get rid of them and their noxious influence, and so cure the disease. In this case again, the interest in the successful maintenance of the theory was widespread, but again it is to be feared the plan will have to go by the board. Not only has large experience with this method of treatment failed to prove its usefulness to any degree commensurate with the plausibleness of the theory first propounded, but physical experiment has demonstrated the impossibility of raising the temperature in the lung by the inhalation of hot air. So that the apparently easy conditions laid down by Halter are impossible, even if, which again has been shown not to be true, a temperature of 41°C. is competent to destroy the bacillus. It would seem then, that the theory has not a leg to stand upon and we may expect to have it relegated to past methods, along with so many others which have "had their day and ceased to be."

We have said that lung temperature cannot be materially altered by the inhalation of hot air. Numerous experiments have proved this, and we append the conclusion of Dr. Ernest Sehrwald, of Jena (*Deutsche Med. Woch.*) as to this point. 1. Dry air can be inhaled through the nose, while the temperature of the air is gradually raised from 50° to 350° C.; the temperature in the pleura at the same time only rises 1° C., even though the experiment be prolonged for one hour and a half. 2. An equal rise can be obtained by rapid and forced respiration. 3. The mucous lining of the trachea is much more sensitive to hot dry air than is that of the mouth and nose, for in the former the temperature of the air cannot be raised above 80° C. 4. When hot dry air is inspired, the frequency of the respiration rises from 80 to 144 in the minute. 5. The temperature in the lungs rises at the same time, but only 1°. 6. Halter's view that the tubercle bacilli are killed by a temperature of 41° is not proved to be correct.

Space will not permit us to follow this interesting subject further, in this issue, but it will be again considered in our next.

ONTARIO MEDICAL ASSOCIATION.

The tenth annual meeting of this Association was held in the College of Physicians and Surgeons' building, Toronto, June 11th and 12th. It is gratifying to note that the influence of this body is gradually being extended. The membership this year has increased by about 70, making a total of 653. There were present at this year's meeting 244 members, which is certainly a goodly number, showing the active interest taken in the

work of the Society. The place of meeting offers many advantages over the theatre of the Normal School, where all previous meetings have been held. Not only was the number in attendance large, as shown by the register, but the attendance at all the meetings of the various sections was more than usually good. The papers were, we think, above the average, as to merit, and there was no dearth of them, some excellent ones being taken as read, owing to want of time. These will, however, appear in one or other of the Toronto Medical Journals at some time during the year, so that valuable contributions to the current medical literature of the day will not be lost.

It is to be regretted that Dr. Goodell, of Philadelphia, was compelled to send a regret at the last moment, at not being able to be present; for the Association as a whole looked forward to welcoming so distinguished a man, and to having the pleasure of listening to his words of wisdom. But the presence of the veteran gynecologist, Dr. Emmet, of New York, did much to dispel the feelings of disappointment occasioned by Dr. Goodell's absence. Another distinguished visitor, Dr. Smith, of New York, gave *éclat* to the proceedings. His paper will shortly appear in our columns. The division of the Association into sections enabled a good deal more work to be got through with, though of course, everyone could not hear everything that was being done.

Discussion on the various papers was up to the average, during which much information of a valuable character was elicited.

The choice by the nominating committee, of Dr. Moorehouse, of London, as President for the ensuing year, seems to have been a popular one. We congratulate the doctor on the honor conferred upon him. To the activity of the secretary, Dr. Wishart, much of the success of the meeting was due, and we are sure he has the gratitude of the Association. Indeed, the Association has been fortunate in the selection of all its leading officers.

We have before referred to the desirability of more Ontario practitioners joining their forces with this central organization, but the statement will bear reiteration, that nothing but good can come to any medical man who takes an active interest in the work done, year after year at the meetings of this, perhaps the most important Medical Society in Canada.

THE PERSONAL ATTACK ON THE DEAN OF TRINITY MEDICAL COLLEGE.

Attacks of a purely personal character are always to be avoided and never justifiable, and the recent one upon the Dean of Trinity Medical College made in the *Canadian Practitioner* of recent date is no exception, and the effort made through such attack to injure Trinity Medical College is equally unworthy. The Minister of Education is a government official and hence his course is fully open for criticism, and criticism by an open letter is perfectly parliamentary, and can not, with any fairness whatever, be construed into an attack on the Provincial University. We are pleased to be in a position to know and assert that financial considerations were never made a ground by Trinity Medical College for maintaining her separate independence. We feel that when a case requires for its support the opening up of old sores (as is aimed at in the reference to Queen's University) the causes of which were proven years ago to be foundationless rumors, circulated by the rivals of Trinity, it must needs be a weak one, and when such tactics are resorted to by an organ acknowledged to be the organ of the University of Toronto, labouring in the cause of higher medical education, we regret the example. When we see medical men in open competition for lodge practice, thereby cutting directly into the tariff of their colleagues, we have little faith in such ever being able to do much for pure science, even though an act of parliament authorizes them to try.

THE ACTION OF CLIMATES OF ALTITUDE IN CHEST AFFECTIONS.—Lendet, in a report to the International Congress of Hydrology and Climalology, terminates his report, *Med. Age*, as follows:

1. The climates of altitudes have, on the affections of the chest, an incontestable action; all powerful when it is a matter of *preventing*; relative or *nil* when it is a matter of *curing*.

2. When the disease is infectious and virulent, they are great modifiers of the culture soil (*terrain*); they do not touch the germ; they do not destroy the ferments.

3. Their *immunity* relative to pathogenic germs is neither real nor absolute; it is accidental and contingent.

4. Their vivifying and tonic action seems to

depend on multiple conditions, some of which, like the freshness and the purity of the air, its transparency and its immobility, have an incontestable importance, and of which, one only, the rarefaction of the air, is really specific.

5. The *delicate* of bronchi and of lung, those menaced by and predestined to phthisis, will derive a decided benefit from a prolonged sojourn on high table-land and mountainous regions, providing that they are not irritable, and that they have been methodically trained to live in the climate of mountains.

6. The confirmed tuberculous may, with advantage, pass the winter in the Sanitaria of Switzerland, provided that they are neither congestive nor hæmoptoic, and that they are strong enough to devote themselves every day to gymnastic exercises which require a keen and bracing air.

TREATMENT OF ALBUMINURIA.—Dr. Waugh (*Med. World*), in speaking of this condition, says:—For a number of years I have been accustomed to prescribe the following mixture as a routine practice in albuminuria:

℞—Potas. acetatis, ... ℥ j.
Chloroformi, ... ℥ ss.
Acid. benzoici, ... ℥ ss.
Aquæ, ... q.s. ad. ℥ viij.—M.
Sig.—℥ ss every four hours.

This combination has proved available, but sometimes fails, and in that case I have not found it easy to find a better. Quite recently, I was attending a four-year-old boy with albuminuria, which appeared without any discernible cause. At intervals the anasarca became extreme, the whole body being swollen to the utmost extent, with the concomitant discomfort and suffering. Then the swelling would gradually subside, and the child become comparatively comfortable, though the albumen never entirely disappeared. When, at the height of a new attack of anasarca, the prescription given above failed to give any tangible benefit, I then substituted the following:

℞—Potas. acetatis, ... ℥ ij.
Acid. benzoici, ... gr. xx.
Sach. lactis, ... ℥ iv.
Aquæ, ... q.s. ad. ℥ ij.—M.
Sig.—℥ j. every two hours.

The result was that within two days the dropsy almost completely vanished, leaving the child in excellent condition, and free from all traces of albumen in his urine. This did not prove permanent; but, in view of the difficulty of securing relief, the rapid and decided action of the lactose deserves attention.

THE DUKE OF CONNAUGHT AT T. G. HOSPITAL.—His Royal Highness was shown over the building, which was thoroughly inspected, and the party then proceeded amid loud cheers to the hospital, by way of Church, Gerrard, Jarvis, Wellesley and Sumach streets. The institution was gaily decorated with flowers, bunting, etc., and on entering the structure every one was struck with its remarkably clean and tidy appearance. Dr. O'Reilly did the honors and did them well. The whole building was inspected from top to bottom, and His Excellency seemed to be impressed with the satisfactory state of affairs which existed. He closely questioned several of the patients, among whom was the unfortunate jockey Douglas, who, it will be remembered, had his leg broken at the races on the 24th, and by his thoughtful demeanor won more than one grateful glance and smile from the suffering patient. Dr. Kilkelly was immensely taken with the hospital and could hardly be induced to return with the remainder of the party. Before leaving, His Royal Highness shook hands with Dr. O'Reilly, the house surgeons and several of the nurses, and inscribed his autograph in the hospital book as follows:

I have been very much pleased and interested with my visit.—Arthur, May 30, 1890 12 noon.

CHOICE OF HYPNOTICS.—Prof. Germain Sée, gives (*Med. Age*) the following classification of hypnotics, according to the cause of the insomnia:

1. *Insomnia from Pain:* Morphine, or antipyrin, acetanilid or phenacetin; sometimes bromides. If visceral, opium or belladonna.

2. *Digestive Insomnia:* Hot, alkaline water laxatives, regulation of digestion.

3. *Vascular, Cardiac and Dyspnœic Insomnias:* Secure ventilation, relieve asthma, by iodides, ethyl or pyridin; morphine, if iodides fail. Amylen, chloralamid, and especially sulphonal are safe; not chloral and bromides. In cardial lesions urethan and sulphonal may suffice; probably not, but they are safe. In angina they are dangerous.

4. *Cerebro-spinal Insomnia:* Sulphonal, amy-

len and chloralamid can be advantageously alternated in agitated and persistent insomnias of organic diseases or insanity. Functional affections have insomnia from cerebral anemia. Hypnotics, if given, must be watched.

5. *Physical Insomnia:* Sulphonal, paraldehyde, chloral succeed best if the loss of sleep be due to worry.

6. *Overwork Insomnia.*

7. *Genito-urinary Insomnia:* Rare Use iodides, cold douches, antipyrin and hypnotics rather than narcotics; with proper regimen.

8. *Febrile, Auto-toxic Infectious Insomnia:* Often diagnostic. Treat cause; antipyrin in diabetes.

9. *Toxic Insomnia:* From opium, alcohol, coffee or tobacco.

THE INFECTION OF THE MOTHER BY A SYPHILITIC CHILD.—One of the most important of all pathological facts, says the *Br. Med. Jour.*, is the transmission of syphilis from father to child without infection of the mother (Collis' Law). Many men aware of this fact, and already victims of syphilis, hesitate to marry, almost entirely on account of their future offspring rather than their future wives. The extinction of the syphilitic virus in well-fed patients is one reason why the disease is not often seen in its hereditary form in children among the prosperous classes of society, as Paget has had occasion to observe. The immunity of the mother is a question which deserves the closest investigation. According to a well-known law, first laid down by Colles and afterwerd confirmed by Baumès, a mother who suckles her syphilitic child never thereby acquires syphilis. Diday, Jonathan Hutchinson, and others have established this law; and the exceptions are so few as almost to prove the rule, if not themselves "suspects." Dr. L. Merz has published notes of two exceptions in the *Archives de Toxicologie* for January.

LARGE VESICAL CALCULI.—At the last meeting of the Montreal Medico-Chirurgical Society, Dr. Hingston exhibited two large vesical calculi, one of which, weighing 5 oz. 5 drachms (an engraving of which was to be found in vol. vi. International Surgery), the other, removed recently, weighing a few grains over five (5) ounces. The latter also had been removed by the lateral peracial section. Dr. Hingston stated, that although both operations had been extremely satisfactory, yet the difficulty experienced on both occasions in the extraction of such bodies, led him to think that the supra-pubic method might in many cases be easier of performance and perhaps not more hazardous.

RUBBER CEMENT.—As a little rubber cement will we think be frequently useful in the repair of many instruments in daily use by the general practitioner, we give the following from the *Can. Pharm. Jour*:—Only virgin rubber can be used for this purpose. It should be cut as small as possible with a wet knife, and put in a corked bottle, with sufficient benzole to cover it well. Solution will follow, but it may be hastened by the heat of the water-bath, care being taken to loosen the cork. Those who make this cement for the first time always overestimate the quantity of rubber required. It swells very considerably before solution, and allowance must be made for this. Benzole from coal tar, not benzin from petroleum, must be used, but carbon bisulphide will answer, though no solvent is as good for general purposes as that first specified.

DIFFERENTIAL DIAGNOSIS OF DISEASES OF THE STOMACH.—Dr. Loundby (*Med. Rec.*) gives the following useful table for diagnosis of stomach troubles:

SYMPTOMS.	GASTRODYNIA	ATONIC DYSPEPSIA.	GASTRIC CATARRH.	ULCER	CANCER.
Character of pain.....	Dull, heavy.	Dull, heavy.	Burning soreness.	Acute stabbing.	Cutting.
Locality....	Epigastrium	Epigastrium.	Behind sternum.	In one spot.	Epigastrium.
Incidence ..	Immediately	After 1 or 2 hours.	After 2 or 3 hours.	Immediately.	After 1 or 2 hours.
Tenderness..	Sometimse.	None.	None.	Usually.	Usually.
Vomiting...	Usually.	None.	Oft'n some retching.	Usually.	Usually.
Hematemesis.....	None.	None.	None.	Usually.	Usually.
Tongue	Clean.	Clean.	Furred.	Clean.	Variable.
Tumor.....	None.	None.	None.	None.	Usually.
Age.....	Usually under 30.	Any age.	Any age.	Usually under 30.	Usually over 40.
Sex	Usually female.	Either.	Either.	Usually female.	Usually male.

STRYCHNINE IN THE TREATMENT OF ALCOHOLISM.—It has been remarked by an ancient authority that all the evil effects of alcohol upon the

system may be obviated by strychnine. Whether this be true or not, there is no doubt it is a most useful drug in the treatment of disorders especially of the nervous system, arising from a too free use of alcohol. Dr. Pombrak, says *The Lancet*, writing in the *Medttsinskoĕ Obozzĕnie* on alcoholism, describes seven cases treated by hypodermic injections of strychnine—a method that seems especially in favor in Russia, where, however, it must be remembered that drunkenness presents as a rule forms somewhat different from those prevalent in this country. Dr. Pombrak found strychnine a very valuable remedy, both in cases of chronic alcoholism and in those of dipsomania, not merely curing the attacks, but abolishing the desire for drink. Even attacks of delirium tremens were influenced beneficially. The treatment must be carried out in a systematic manner, and must frequently be kept up for a very considerable period. As to the dose, Dr. Pombrak in cases of moderate severity commenced with one-thirtieth of a grain, in more serious ones with one-fifteenth. He found that while the treatment was being carried out there was no necessity to order the patients to abstain from the use of spirits, as they always did so of their own accord.

Registration of Doctors as Druggists.—There has been considerable friction between the medical profession and the authorities of the College as to the amount of the fees to be paid by the former on registration as pharmacists. Prior to the passing of the late amendments, it was optional with physicians whether they registered or not, but, as a matter of fact, most of those carrying on drug stores really did so for the benefit of their apprentices, who would otherwise have been debarred from recognition of service by the College of Pharmacy. The late amendments made registration compulsory with those physicians who desire to carry on the business of pharmaceutical chemists.

The question arose as the amount of the fees. he registrar, acting under special direction of the esident, demanded ten dollars as the legal amonnt. embers of the medical profession claimed that e law permitted them to register on payment of ur dollars. The controversy engendered some feeling, and, if pursued further, would have ubtless resulted in an open breach between classes whose relation are of the closest character, and should be the most amicable.

The matter came up for discussion in committee at the council meeting, and legal advice having been taken, it was decided to retreat from the position, and make amends as far as possible, by returning to physicians who have sent in their fees since the passing of the amendments, all moneys in excess of the fee of four dollars which the law prescribes.

Recent legislation placed doctor and druggist on an equal footing, and it is exceedingly explicit in this respect. We have nothing to say as to the justice of this state of things; it is sufficient that it is the law, and as such must be respected, while it devolves upon the College to administer it with wisdom, impartiality and honesty.—*Canadian Pharm. Jour.*

Treatment of a "Cold" by Salicylate of Soda.—The *Memphis Med. Jour.* says of this remedy: Salicylate of sodium in free doses gives as satisfactory results in the treatment of "bad colds" as it does in cutting short tonsillitis. Sodii salicylatis, ℥ss; syr. auranti cort., ℥ss; aquæ menth. piper., ad, ℥iv. M. Sig. A dessertspoonful every three or four hours. A dose every three hours until a free specific influence of the salicylate—tinnitus aurium—is observed—will so far control the symptoms that the aching of the brow, eyes, nose, etc., will cease. The sneezing and running from the nose" will also abate and will disappear in a few days, not leaving, as is usual under other treatment, a cough, from the extension of the inflammation to the bronchial tubes.

Insomnia.—Extract from an article in the *Medical Press and Circular*, by Edward Warren Bey, M.D., C.M., LL.D., D.M.P., Chevalier of the Legion of Honor, 15 Rue Caumartin, Paris. "To those familiar with the use of Bromidia (Battle), no argument is necessary, for it speaks for itself by fulfilling the indications for which it is administered with a certainty, efficiency and harmlessness, which elicit at once the wonder of the patient and the delight of the prescriber, and give to the profession the assurance of possessing one remedy at least which approximates so near to infallibility of action as to justify the title of specific."

Persistent Virulence of the Tubercle Ba

CILLUS—The great powers of life evinced by these organisms make it necessary to observe the strictest precautions regarding the disinfection of the patent's sputa. The Paris correspondent of the *Therap. Gaz.* says: "Koch, and Tappeiner before him, have shown that the phthisis bacilli are not killed by the drying of the sputa. But Drs. Malassez and Vignal have carried the experiment further, to show the microbe's tenacity of life. In order to imitate closely the conditions of ordinary life, they have taken phthisic sputa, dried and powdered them, then moistened them again, and repeated several times the same series of operations, just as is likely to happen naturally to spittles dropped on the floor or the sidewalk, and found, by actual comparison, to be almost as numerous and virulent as the first day."

CANADIAN MEDICAL ASSOCIATION.—The twenty-third Annual Meeting of the Canadian Medical Association, will be held in Toronto, on the 9th, 10th and 11th of September next.

Arrangements will be made with the railroad and steamboat companies for a reduced travelling rate, and certificates entitling members to such reduction will be issued by the secretary on application.

Members intending to present papers at this meeting, are requested to notify the secretary at as early a date as possible of title of the paper intended to be read.

JAMES BELL, M.D., *Sec.*

BORIC ACID AS AN ANTISEPTIC. — Dr. Plant (*Therap. Gaz.*) holds that this drug is not by any means the harmless antiseptic it has been supposed to be. He believes that "boric acid, when brought into the peritoneal cavity or under the skin, results in many cases in rapid death if the quantities dissolved are large, or, if small, the final fatal effect is preceded by acute parenchymatous nephritis."

TINCT. IODINE IN BRONCHOCELE.—Dr. Davies (*Br. Med. Jour.*) says tinct. iodine in 5 minim doses, with hydrochloric acid and glycerine answers well in simple glandular cases of bronchocele. This amount may require to be increased. When there is fibrous growth present, the injection of tinct. iodine is necessary—and Dr. Davies has never seen any serious results if we exclude cases of cystic goitre.

HAIR TONIC (*Chem. and Drug.*)

℞—Quin. sulphat., ... gr. xx.
Tinct. jaborandi, ... ℥ j.
Glycerini, ... ℥ j.
Aq. Colog,, ... ℥ ij.
Myrciæ Spt., ... ℥ ij.
Aq. rosæ, ... ℥ xj.—M.
Sig.—Apply locally.

UTERINE BACILLI.—The following is given by *The Dixie Doctor:*

℞—Iodoform, ... ʒ v.
Acaciæ pulv.,
Amyli. pulv., ... āā gr. xxx.
Glycerini, ... gtt. xxx.—M.
Ft. bacilli, No. iij.

Sig.—Insert one in uterus for abrasions in genital tract after delivery, or after operations in or around vagina. It disinfects for a day or two.

ANOTHER remedy is brought forward for the night sweats of phthisis. It is camphoric acid, the dose of which varies from thirty to seventy-five grains, the larger amount being given in divided doses. The action of the drug is not noticed until the following night, but it continues for several nights.

AMENORRHŒA.—Dr. Poulet says the following is a very certain emmenagogue:

℞—Acidi Oxal., ... gr. xxx.
Syr. Aurant, ... ℥ ij.
Aquæ, ... ℥ iv.
Sig.—℥ ss. every hour.

SIR MORELL MACKENZIE has been awarded (*New Eng. Med. Monthly*) £1500 damages in his suit against *The St James' Gazette* in connection with his treatment of the late Emperor of Germany, and £150 in a similar suit against the *London Times.*

DR. HALEY (*Med. World*) says that an ointment consisting of 80 grains of calomel to the ounce of prepared lard, is a certain cure for pruritus vulvæ and ani.

BIRTH.—At Edmonton, Alberta, N. W. T., on June 1st, 1890, the wife of Hon. H. C. Wilson, M.D., Speaker Legislative Assembly—a daughter.

THE CANADA LANCET.

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NOTES OF CASES READ BEFORE THE MEETING OF THE BATHURST AND RIDEAU MEDICAL ASSOCIATION, SMITH'S FALLS, JULY 25, '90.

BY SIR JAMES GRANT, M.D., F.R.C.P.L., OTTAWA.

It is a well known fact that Entero-epiplocele is a hernial sac containing both intestine and omentum, such as the following:

June 19th. Was summoned to attend an old lady in her 82nd year, who suddenly was taken ill three days previous, with nausea, vomiting, pain in the right groin and considerable swelling, attended by fever; temperature 101½, pulse 108, small and irregular, tongue rather dry; generally restless and unable to keep in one position for any length of time. On examination, a large swelling was observable in the right groin, rather in the direction of oblique inguinal hernia, although doubtless femoral in its character. The history, that the greater part of the swelling came down suddenly during the act of coughing and had remained there since that occurrence, fully three days previous. Owing to ankylosis of the knee joint, the leg could not be flexed, so I bent the body slightly forward and used taxis, and after considerable effort a large portion of intestine returned with a distinct gurgling sound, lessening very considerably the lowest part of the rupture. There still remained *in situ* quite a hard and immovable growth, nelastic and somewhat flattened in character, and uite unlike bowel. On careful enquiry the old ady said that for some years she had a little swell- g in that part, which did not give her any trou- e until the occurrence of the present attack, ich came on very suddenly. Being unable to duce the entire protrusion at the one time, I feared that an operation might ultimately be necessary. I applied an ice bag to the part and a sedative internally to allay pain and give a degree of rest which had not been the case for fully two days.

20th, 10 a.m. Passed a tolerably comfortable night, having experienced a considerable lessening of pain and tenderness over the parts, with well marked reduction also of the pulse and temperature. I again tried the taxis, but could not budge the remaining part of the tumor, which I concluded was old and attached omentum. Still continued the ice, milk diet in small quantities and an occasional dose of chloral hydrate, which had a very soothing effect.

21st. Passed a tolerably good night and improved in her general condition. Ordered ol. ricine and the ice bag at intervals when pain in the parts was experienced.

21st, 9 p.m. The oil acted vigorously and was marked by a general improvement otherwise.

22nd. Slept well during the night and taking more nourishment than the previous day, and the present prospect is towards gradual recovery, which will be slow, doubtless, from the advanced age of the patient.

These compound cases of hernia are perplexing and demonstrate beyond a doubt, the necessity of time and watchfulness, before deciding upon an operation, such as obstinate strangulation would demand.

CASE II.—*Tumor (fatty) in the groin, simulating inguinal hernia.*

Mr. L., æt 36 years, of strong and robust habit of body, and usually enjoyed the best of health. January, 1862, he consulted me concerning a rupture in his left groin of fully 14 years' duration. He had been recommended various forms of trusses, which he had tried very persistently for fully 14 years. The growth increased to such a size that he was unable to use appliances which would in any way lessen its size or reduce it to a convenient form. I was consulted with reference to the truss that was necessary at the time. I made a careful examination of the parts and ascertained the following facts: 1st. The growth was gradual and progressive in its character, and at the onset not the result of any violence whatever. 2nd. There did not appear to be the characteristic impulse on coughing, such as is usual in purely her-

nial tumors. 3rd. There was not the slightest disposition to any reduction by taxis. 4th. There was no disposition to any interference with bowel action. 5th. The tumor had quite a doughy feel, such as one would experience in the manipulation of omentum or fatty growth, and fully as large as an ordinary sized turnip. From its moderate rotundity and the absence of other indications of a hernial type, I came to the conclusion that it was really a fatty growth and not a hernia. Under these circumstances I decided to operate and test the character gradually. This was soon accomplished under chloroform and the entire body of the tumor enucleated without any trouble whatever. He made a speedy recovery, became relieved of his growth and trusses at one and the same time.

Case III.—*Eccentric action of a splinter of wood in the leg for a period of fully ten years.*

W. R., æt 21 years, vigorous habit of body and usually enjoys excellent health and spirits. Muscular and generally well developed. Last April, twelve months, I was consulted for a pouting granular growth on the left thigh, middle third and externally. At first sight it gave the impression of foreign body, which I thought might be dead bone and the result of some local injury. No particular history could be obtained, except that this growth had come on gradually and had been there for some months, the only inconvenience being an occasional discharge of bloody serum; almost painless in character, as to the state of the surrounding tissues. I probed the sinus which was fully four inches in length longitudinally, but no foreign substance could be detected at the time. A free opening was made at once and the parts dressed with lint. On the third day, not being fully satisfied as to the healing powers of the wound, I decided to make a deeper exploration of the parts. On pressing one end of the wound with the probe, I observed an apparent movement at the other end of the opening, which at once convinced me some foreign substance was lodged there in the deep parts, although no sinus could be detected. I cut down freely and with the forceps removed a pine splinter fully two inches in length and the eighth of an inch in thickness. How did this come there, was the query of my patient. He said that ten years previous, crossing a fence with a small pine paddle in his hand, he fell and a portion of the broken paddle entered the left leg about its middle third posteriorly and to the inner side. After some weeks the wound closed, and afterwards the only inconvenience he experienced was an occasional sense of stiffness in his leg, which lessened by use of the limb. Fully six months before I was consulted a small swelling was observed on the outer part of the left thigh about its middle, externally, which resisted all outward applications.

This case is interesting as evidence of the peculiar action of muscular tissue, which by a species of almost vermicular power, can transport foreign materials from one part of the body to another, without apparent inconvenience; and again it is evident that woody fibre is not liable to undergo disintegration in being thus sacculated for years in the tissues of the body. I have known glass, lead and iron to be removed after many years, and to have given very little inconvenience, while closed in by the tissues. Around this splinter of pine quite a fibrous sac was formed, which I required to scoop out in order to facilitate the healing process. The young man is now healthy and vigorous as usual.

Case IV.—*Acute convulsive seizure, the result of a fish-bone in the rectum.*

June, 1857. Was suddenly summoned to Murray St., Ottawa, to Mr. J. S., æt 57 years, a man of strong habit of body and usually most vigorous in the discharge of business, being a grocer. While behind his counter, he was seized with a severe convulsive fit, which had passed over in the space of half an hour. On recovering consciousness, his first expression was, "Oh, what a tearing in my bowel." It being lent period of the year, and fish the chief source of diet, it occurred to me that a bone might be lodged in the folds of the rectum. The bowel was at once explored. Without much effort I detected a considerable sized fish-bone imbedded in the rectal folds, and this being removed he experienced almost immediate relief. This case at once opens up some interesting points as to nervous distribution in and about this part of the alimentary canal. The cerebro-spinal and sympathetic systems have an important part to play in nervous rectal force. The sacral plexus as well as the mesenteric and hypogastric plexuses are the chief collateral centres of reflex and influence. It is now a settled point that contraction of the external sphincter muscle is in part at least,

due to the influence of *a nerve centre located* in the *lumbar region* of the spinal cord. This *very nerve centre* is subject to various influences, and the varied distribution of the spinal nerves serves to explain the reflex symptoms of such a case in the present. Through the alimentary tract, how frequently are convulsions the result of imperfectly assimilated food, thus demonstrating how such disturbing influences stir up remote nervous centres, telegraphing as it were a convulsive message to the unfortunate sufferer. The ano-vesical centre of man has recently been considerably cleared up by the careful observations and deductions eliminated out of cases of injury as well as lesions, of the terminal extremity of the spinal cord and its nerve roots. Kirchoff is of the opinion that the *vesicle centre* is situated in the conus medullaris, in the region of exit of the third and fourth sacral nerves. One of the most important functions of the spinal cord is its action as a reflex centre, normal or abnormal as the case may be, and in the discharge of the duties of professional life we are constantly reminded of the vast and varied manifestations which spring from spinal and ganglionic nervous centres, quite irrespective of the complex nervous mechanism of brain tissue *per se*.

TREATMENT OF PNEUMONIA.

BY J. L. ADDISON, M.D., ST. GEORGE, ONT.

Pneumonia has, since our last meeting, been more prevalent than usual, and has removed from our midst some of our most earnest workers. This association must feel their loss; the Board of Health, too, deplores the loss of one of its active members, and I feel that you will all agree with me that a disease with so high a mortality rate claims, at our meeting, a share of attention. The importance of the subject then is my excuse for bringing it before you, and while I feel the weakness of a young practitioner to do it justice, I trust my older and more experienced confreres will lend me a helping hand in the way of discussion.

Few diseases tax the skill and judgment of a physician more than pneumonia, and in very few is he required to be more cautious.

It would perhaps be more convenient to deal with the treatment under the two heads of Primary or Secondary Pneumonia, though they are in many respects similar. I shall endeavor to state, as briefly as possible, my own experience with the remedies I have tried, and touch on some of the more important ones used by others.

Acute Lobar Pneumonia or Primary Pneumonia is generally admitted to be a self-limiting disease, and will run its course in spite of any known treatment; yet judicious treatment will, at least, make our patient more comfortable, and may possibly reduce our present rate of mortality. The majority would recover without medicine, being left entirely to nature and good nursing: many complicated cases can be saved from an untimely death by judicious interference, and, some are doubtless lost through an imperfect knowledge of the condition of the patient, and of the necessary remedies. Any routine system of treatment resorted to indiscriminately will prove unsatisfactory. A great deal depends upon our preserving and supporting the vital powers, and upon controlling and averting complications.

The first essential is rest in bed, in a well ventilated room, free from draughts, with a temperature of 65° to 70°. The patient should not be allowed to get up for the calls of nature, and if heart-failure is threatened, should not be allowed to talk. The bed clothes should be tucked in closely around the neck.

The next is good nutritious food, fluid or semi-fluid, given regularly and at proper intervals. Patients who will take half a pint of milk every three hours, generally do well. Some, after the fourth or fifth day, will require the same every two hours through the day and every three hours at night, with an occasional cup of beef-tea or thick broth. A little beef-juice or scraped raw beef, or an egg beaten up and mixed with milk is good. The bowels frequently need attention, and a brisk purge with calomel and soda often has a good effect at the outset. After this, they should be kept open every day or second day with a mild laxative, or by enema. Locally apply a linseed meal poultice, covered with oil silk or flannel, and have the shoulders protected with cotton batting. If pain is severe it is often well to precede the poultice with a sinapism. Mild cases do well on the above, without medicine. Cases of average

severity do better on taking liquor ammonia acetatis, freshly prepared, one drachm in water every three hours.

Where the sputa are very viscid, I prefer ammon. carb. gr. v., vin. ipecac. m. v. to x., pot. cit. gr. v. to x, in water every three hours. The above is a basis of treatment to begin with. If the temperature is above 104°, I give at the same time one drop of Fleming's tinct. of aconite hourly for six or eight hours; if 105°, the same dose every half hour for six or eight doses. Formerly I gave for high temperature 20 grains of quinine. The results were very good, with one exception, which was followed by threatened collapse, the patient fainting several times and requiring very free stimulation to ward off heart-failure. Since then I have used quinine only in small doses repeated as often as necessary.

Watch the pulse. Soon as there are any indications of heart-failure, drop the ipecac. and add tinct. digitalis and tinct. nux. vom. āā m. v. to x. While giving this, should the pulse become weak, dichrotic or compressible, resort to the old stand bye, whiskey, and get the best you can. Begin with a tablespoonful every two or three hours, and increase the amount, if necessary, as you approach the crisis. The majority of cases requiring stimulation will take from six to eight ounces a day. In one case I gave sixteen ounces a day, for a few days, with good result. Should the stomach refuse digitalis, the 5 per cent. tinct. of strophanthus, in three or four minim doses with the ammonia mixture or separately in 10 mim. doses, three times a day, will sometimes do instead. If the stomach is very irritable, it may be necessary to feed and stimulate per rectum. Where resolution is delayed, a good sized fly blister or a succession of smaller ones is often very serviceable. Iodide of ammonium is said to aid in the same condition. When prune-juice sputa appear, with weak pulse. turpentine is very useful. Dr. Davis says: "When universal engorgement of the lungs follows the initial chill, with a purplish or leaden hue of the skin, short and hurried breathing, small, frequent and weak pulse, cool extremities, and high fever, venesection should be practised at once."

TREATMENT OF COMPLICATIONS.

Pleurisy—Know its extent and severity. If moderate it is generally relieved by cupping, mustard or poulticing. Now and then we require to give an opiate and $\frac{1}{8}$ to $\frac{1}{4}$ gr. morphia, hypodermically, will generally give prompt relief.

Hyperpyrexia—I prefer quinine, cold sponging or the wet-pack. Antipyrin, antifibrin, and kairin are recommended.

Delirium, whether due to weakness or physical disturbance, I have. in the cases I have met, always been able to control better with chloral and bromide of potash than with opium. A case in point will perhaps better illustrate:—Mrs. B., æt. 49, spare woman, nervous temperament, with a weak heart, had pneumonia in March last, with a typhoid form of delirium; was very prostrate the second week, with a busy, active delirium, subsultus, constantly picking at the bed clothes. She was taking stimulant. I gave her an extra dose about $1\frac{1}{2}$ to 2 ounces of whiskey, and followed it at once with chloral hyd. gr. xv., pot. brom. gr. xx., repeating half this quantity every fifteen minutes until she dropped asleep. She took about 40 grs. of chloral and slept about four hours. On waking, took an ounce of whiskey in a cupful of milk and slept again for about two hours. She made a good recovery.

Opium, in these cases, can only be given with caution. Full doses, it is said, often increases the prostration and fail to procure sleep. Where there is much prostration it is always well to guard the chloral with an extra dose of stimulant.

Coma is often uræmic, and best treated by colchicum and spirits of nitric ether.

Jaundice may be due to impeded circulation, causing congestion of the liver, to a gastro-duodenal catarrh, or to passage of gall-stones. $\frac{1}{4}$ gr. of calomel with 5 grs. of soda every three hours, is generally useful. Poulticing and Dover's powder relieved in one case due to gall-stones.

Diarrhœa is not an infrequent complication. Substitute chloride for carbonate of ammonia, and give bismuth, gr. xv., every three or four hours. If not relieved in 24 hours, add morphia $\frac{1}{8}$ to $\frac{1}{4}$ gr. or Dover's powder gr. x. and stimulants.

Malaria requires quinine. It is serviceable as a tonic in many cases where there is no malaria.

Abscess of the Lung I have never met, but would give iron, quinine, strychnine and whiskey. These failing, pneumotomy. All other complications must be treated on general principles.

Secondary Pneumonia occurs generally in con-

nection with, or as a complication of, influenza, measles, whooping cough or typhoid fever. Sometimes in bronchitis, septicæmia, gout, rheumatism or skin diseases. The treatment is very similar to that of the primary form, ever bearing in mind the disease of which it is a complication. Time will not permit me to go into details. Every case must be made a special study, and the great secret of success lies in knowing when to administer and when to withhold remedies. In these cases chloride of ammonia is a very useful substitute for the carbonate, or they may be given in combination. For adults I generally prefer 5 grs. of each every three or four hours, with from 8 to 12 grs. of quinine a day in divided doses. If cough is troublesome, broken doses of Dover's powder are useful. In infants an occasional emetic is useful. I have never used opium for them. Counter-irritation with camphorated oil, ammonia liniment or mustard is generally necessary. In many cases large sinapisms are preferable to poultices. When the fever subsides one old remedy I have found of special service. It is Basham's mixture, and I generally use it in the following strength: Liq. ammonia acetat. ʒi., acid acetic fort m. iv., tr. ferri. mur. xv., three or four times a day. Some of our text books hold that iron is contra-indicated when the tongue is furred; but I have seen it clear under the administration of this remedy when the other remedies have failed.

Of late an old form of treatment has been revived and advocated by many. I refer to the early administration of veretrum verids, and following later with digitalis. If it means the moderate use of digitalis as a heart tonic, I see no objection to adding the ammonia; but if it means pushing digitalis to the full physiological extent, as some say it does, it seems to me too heroic and if generally adopted is not likely to lessen the mortality rate.

Dr. Clemens, in one of the German medical journals, speaks very highly of the nse of inhalations of chloroform diluted with alcohol in the treatment of severe cases of pneumonia, and claims the immediate alleviation of pain as well as shortening the duration of the disease. His method of administering, the drug is as follows.—A small hall of lightly wound cotton is allowed to absorb ʒij to ʒiij of the alcoholic solution of chloroform. This is then wrapped in loose cotton, and held within about an inch of the face. The inhalation should be interrupted from time to time. He claims he has not lost a case in forty-two years. This might be a very useful addition to our other lines of treatment.

Dr. H. G. Beyer, in the *Med. News*, June 15th, 1889, asks the question, "Can pneumonia be cut short by antipyrin?" and reports two favorable cases, where he gave a single dose of morphia, ⅓ gr. followed in half an hour by antipyrin 30 grs., and concludes by saying that while these two cases prove nothing, they are, to say the least, extremely suggestive. Such heroic doses of antipyrin would, I fear, occasionally cause heart-failure, and might have an unfavorable action on the kidneys.

Dr. Leeming, of New York, recommends a single dose of a teaspoonful of calomel at the outset, in cases of infectious pleuro-pneumonia.

To summarize very briefly, I prefer the expectant plan of treatment, sustaining the vital powers, watching complications, and treating them as they arise, making every case a special study; the very cautious use of opium, digitalis in moderate doses as a heart-tonic, with free stimulation for heart failure.

Correspondence.

MEDICAL EDUCATION IN ONTARIO.

THE UNFAIR STATE-SUBSIDIZING OF ONE TEACHING MEDICAL COLLEGE, WHILE ALL THE OTHERS, DOING EQUALLY GOOD WORK, ARE ENTIRELY SELF-SUSTAINING.

To the Editors of THE CANADA LANCET.

I send you a copy of a letter published in the "*Canadian Practitioner*" of July 16th, in reply to a very strong personal attack made upon me by the editor of that journal, simply because I exercised the right which I possess, in common with every Canadian, of criticising the recent policy of the Government of Ontario, in regard to medical education. A second editorial of much the same style as the first, appeared with my letter. As I consider that every point of importance in both editorials is fully answered in my letter, I shall at present take no further notice of such attacks, which do me no harm, and from their virulence

show the straits to which the *Practitioner* is driven, in attempting to defend what is as utterly indefensible as it is unjust and unfair to all our Independent Medical Colleges.

No Government, however strong, can afford to persist in what is, on the very face of it, a *great wrong*, and it is not, and cannot be, in the interest of either the Government or of any *one* institution to seek to maintain a state of things which is strikingly unfair.

As the subject is one which concerns the entire profession, I think it well to have the letter appear also in your well-conducted and very widely-circulated Medical Journal.

WALTER B. GEIKIE.

Toronto, July, 1890.

To the Editor of "The Canadian Practitioner."

In your issue of June 2nd, you have a long editorial, based on a letter addressed by me in March, 1890, to the Hon. the Minister of Education. The *very gross, absolutely unfounded,* and *most unwarrantable* personal attack which you make upon me, I shall notice no further than to remark, that it shows not only very bad taste, but also a very *weak* cause, which has to resort to personal detraction of a writer, who complains only of a gross *public* injustice done to ALL our Independent Chartered Medical Colleges. This injustice is acknowledged with regret by nine-tenths of the profession, and by as large a proportion of the public interested in such matters. The letter referred to, was a reply to an official communication received shortly before from the Minister of Education, and it *pointed out* the wrong complained of, as well as *proved it*, by reference to printed parliamentary records, and by figures, the correctness of which cannot be disputed.

The injustice done to ALL Independent Medical Colleges of Ontario has arisen from the restoration in 1887, of a Medical Department to the University of Toronto, without these Institutions having been fully and *separately* or even *at all* consulted beforehand, as they certainly should have been. If, when the restoration was effected, there had not been several long-established Chartered Medical Colleges in full and successful operation, there would have been less cause for complaint. Under such circumstances the restoration would have been required, the public and the profession would have asked for it, (as they did not do) and it could not, by any possibility, have affected injuriously the vested rights and privileges of sister Institutions, which on that supposition, would have had no existence. But the very reverse of this was the fact.

It is well known that the Parliament of Canada in 1853 abolished the Medical Department of the University of Toronto, on the express ground "*that it was not in accordance with sound political economy for the State, directly or indirectly, to aid in educating men for lucrative professions,*" *as this education was given even at that early day to a sufficient extent in Colleges and Schools conducted entirely by private enterprise.* And up to 1887, the Government of Ontario continued to carry out this same policy, and for the very same reasons; and since 1853 several teaching Medical Corporations have been established and have incurred very heavy expenditure in the erection and equipment of suitable buildings and laboratories, and have attained to a high degree of efficiency and success, reached after many years of very ill-remunerated work on the part of their teachers.

I said in my letter to the Minister, and here repeat it, "that the change made in 1887 was not asked for, by the country at large. It is emphatically true, that beyond a very few *personally interested individuals*, chiefly in Toronto, and notably several members of the late Toronto School of Medicine, who were on the Senate at the time, and all of whom became members of the new "Faculty," which they gave their influence to create—the changes made, were neither asked for, nor needed by the profession or by the public. There was no dearth of well-educated young doctors to meet every possible want of the province —indeed, then as now, large numbers of our young medical men looked to the United States and to other countries in search of a wider field in which to practise." In your editorial you allude to a proposal made to Trinity Medical College in 1887 to suspend her charter, and amalgamate with the Toronto School of Medicine to form the new "University Faculty." For many good reasons this was declined. The entire Faculty discussed the scheme fully, and unanimously reached the conclusion that it was "unpractical" and "impracticable." Indeed not a few members of the Faculty, who knew all about the *proposal* and its

origin, considered it a mere trap, falling into which would have destroyed the identity of Trinity Medical College, to which Institution, in his letter to me, the Minister pays the warm tribute of having "*already contributed greatly to the improvement of the medical education of the Province.*"

You find fault with me for using the term "trap" in reference to the "amalgamation" proposed to Trinity Medical College by a Committee of the Senate of the University of Toronto, and most incorrectly speak of this expression as casting a slur upon many very honorable and well known gentlemen who were members of that Committee. Now, I am quite certain that *most* of the gentlemen you name, regarded the proposal in question as an excellent one, and that they had not the remotest idea of anything being in it which was not, in their opinion, calculated to promote the best interests *of the University first, of course*, but likewise of all concerned.

But the plan proposed was a "scheme" nevertheless, editorially advocated in your journal at its rise, then *persistently* pressed upon the Minister of Education by gentlemen, several of whom are now members of the restored "*Faculty*," and it was so pressed, not at all in the interest of Trinity Medical College, nor of her Professors, but simply in promotion of their own, which, by an easy and most natural process of reasoning, they soon came to regard as identical with those of the University of Toronto.

For Trinity Medical College to have become a party to the proposed "scheme" (for this was the term constantly made use of in private conversation by its promoters), would have been simply not only folly, but annihilation, suicide, or any other stronger term, if such can be found, to express self destruction.

You quote with great gusto the concluding sentences of another old letter of mine, to the effect "that it will be time enough to give full consideration to the subject of amalgamating the two Medical Colleges in Toronto when the Government and Legislature of Ontario shall have fully decided to 'create, equip and liberally endow, a new Medical teaching body,' giving a salary of not less than $2,000 a year, and a good retiring allowance to each professor, when from age or ill-health, he is no longor fit for duty."

On first reading your article, I could not remember having written this; but quite accidentally I have since came across a letter I sent to one of the city papers, dated March 28th, 1887. At that time we had heard that a good deal was being said and done by the promoters of the "scheme," but this was just before Trinity Medical College had heard officially from the Senate's Committee on the subject. Now, *could* you not, *should* you not, have been ingenuous enough to say, in giving the closing sentences of that letter, that it was the end of a communication written for the sole purpose of showing, from every possible point of view, how *unwise* and how *undesirable* it would be to *restore a Medical Faculty to Toronto University*, and thus reduce that institution in Medicine, from the truly *Provincial* position she had so long occupied, as a centre round which many distinct affiliated Medical institutions might cluster, each sending up to her from time to time, its quota of candidates for examination and degrees, to that which she now holds, of a mere local Medical College, competing eagerly for students, as would inevitably be the case if the proposed "restoration" should ever become an accomplished fact? In this very letter are also the words, and why did you not quote these as well as the others? Supposing the "Medical Faculty" to have been "restored," I add: "All other Medical Schools may not subside at once as expected, and its policy (that of the supposed 'Faculty') *would*, indeed *must*, be, to belittle, and if possible to *destroy*, other schools, by virtue of the supposed overshadowing auspices under which it would be set agoing, and the *public aid* it would count upon receiving."

I ended this letter as I did, because I regarded, *and this too on very high authority*, the *conditions* supposed by me as to "endowing and equipping," and the giving of the salaries and retiring allowances referred to, as just as unlikely to occur, as would be the appointment of the Editor of *The Canadian Practitioner* as Accoucheur-in-chief to the Royal Family of Liliput or of Brobdingnag.

I never have, and never will, cherish other than the kindliest feeling towards all Sister Institutions, including under this term not only all our Medical Colleges, but *all* our Universities as well. It is for the good of our country at large that all of them should continue to prosper in the highest degree, and I would not wrong or injure one of

them by doing or suggesting anything which I would not be quite willing to have carried out in my own College. But, as head of one of our Medical Colleges, I do very strongly object, and will continue with all the energy I have, to protest against any *one teaching Medical College or Faculty* in the Province, having, or trying to secure, any undue advantage over the others, such as that arising from its being constituted an integral part of the State-supported Provincial University. I do so because in Ontario, with her several Independent Medical Colleges in operation, it is very unjust to these Institutions that, after an interval of nearly forty years, during which all our Medical Colleges have been, as was right, on a footing of perfect equality, *one* of them (*it matters not which*) should be placed in a position which may be looked upon by some as having a certain prestige connected with it. This is manifestly most *unfair* to all the rest.

Further, it *can* and *has been* proved that *public funds have been* and *are being* largely used, although not *openly* or in a "*direct, straightforward*" way, to promote medical education for the benefit of this *one* medical teaching "Faculty" in the new position in which the "restoration" has placed it. For it is well known that the new lecture rooms and laboratories in the Biological Department of Toronto University are very largely used for medical teaching purposes. Every medical student who attends classes in this building (which, as part of the Provincial University, is supposed, as it should, to belong as much to one Medical College as to another) is enrolled as a *student of the Medical Department of Toronto University*. And, further, by University statute, *approved of by Government before it could come in force*, all fees paid by medical students attending the Biological Department go into the funds of the "Medical Faculty" and *not* into the "general funds" of the University. All the instruction these medical students get in this Department is given by teachers belonging to the *Arts* Department, who are paid entirely by salaries, drawn, as in the case of all the other *Arts* professors, from the latter source. Thus certain Arts professors can earn a large amount of medical students' fees, which amount goes *not* to the University, the needs of which are said to be great, but to be distributed in a proportion, fixed by University statute, to various members of the Medical Faculty *who do not earn any part of it*, and *who do not teach the subjects* for which it is paid. (For the Statute, and the proportions given to each, and the list of *names* of those who share the fees, see Ontario Sessional Papers, 1887, No. 52, page 110.)

How largely this University "Medical Faculty" is subsidized in this way, it is easy to show. (For the fees, see University Medical Calendar for 1889-90, page 30.)

A class of 240, including all the *four* years, would be a moderate estimate. This will give 60 medical students in each year. Total fees paid by each first-year student, $73. Of this sum, $12 is paid for Physiology, $12 for Chemistry, $5 for Practical Chemistry, and $5 for Biology (including Zoology and Botany). The teaching in the branches named is *all done in the Biological Department by University-salaried professors*, who receive no portion of these fees, amounting to $34 for each first-year student. $34 × 60 = $2040 is thus paid into the *University Medical Faculty Fund*, by first-year students, for work which is not done by the purely medical teachers, *although they get all the fees for it.*

In the second year, it is much the same. $76 is the total amount of fees payable. Of this, the branches taught in the Biological Department are: Chemistry and Physiology, $12 each; Histology, $8, and Medical Chemistry, $5, in all $37 × 60 = $2220, paid into "the Medical Faculty" funds for second-year's fees, all earned by University-paid (Arts) teachers.

$2040 first year's fees.
2220 second "

$4260 paid into the *Medical Faculty Funds* each year, from first and second years' men alone.

There is positive proof, therefore, that the Biological Department of the Provincial University is hard at work earning a large yearly *bonus* for this one Medical Faculty, which *bonus* the fees of every medical student, wherever he may come from, goes to swell; while for the *other* Medical Colleges it does absolutely nothing, but is persistently used as a bait, to draw away their students if possible. Even the Women's Medical College in Toronto, where the Faculty get nothing, or next to nothing, for their hard and good work,

had, last winter, numbers of her students thus drawn off, their fees going to increase the *Medical Faculty bonus*, and their names to swell the numbers in attendance.

It will be observed that all the "subsidizing" and medical teaching in buildings erected with *public funds* just referred to, is in connection with some of the *primary branches* of the curriculum. It is consoling to the Independent Medical Colleges to know, that at the recent Medical Council examinations, where the competition is perfectly fair, and between students from *all* the Colleges, the standing taken by students coming from these Colleges was such as to prove that while the *subsidizing* referred to, and the buildings erected out public funds is a *glaring injustice*, the teaching given in the Independent Colleges, who build and equip their own Laboratories, etc., etc., is fully abreast of any in the Province. For the one candidate who took honors *this* year, and the *two* who too honors *last* year, came from an Independent Medical College; and while the *average* percentage of *rejections* in the primary examinations of the *Council* this year was 50, the percentage of primary students from the only Independent College regarding which I have been able to procure accurate information—who failed in their examinations—was only *twelve and a half;* and I have no doubt the other Independent Medical Colleges can show very similar results. This fact alone speaks volumes *against* the great *wrong*, the manifest *unfairness* which is done these Independent Colleges on the one hand, and in favor of the *great excellence of their teaching*, despite this injustice, on the other.

Your assertion as to my having "attempted" years ago "to destroy the Kingston Medical School" is absolutely without foundation. In March, 1883, THE CANADIAN PRACTITIONER published a full explanation of the circumstances you allude to. At that time, also, one of the then Editors of THE PRACTITIONER, who was every inch a gentleman, called upon me and asked me regarding the matter. I showed him and told him all I knew, which was exceedingly little, and he expressed himself disgusted and surprised at any one having tried to stir up strife by attempting to make *something* out of *nothing*. I have a copy still by me, of the letter published by THE PRACTITIONER, either in the March or April number, 1883, and to this letter I refer anyone who wishes to know anything further about an old falsehood, which long ago was shown to be such. Your object in reviving it, is evidently the amiable one of trying to kindle unfriendly feelings towards my colleagues and myself amongst the Kingston Faculty; but happily this cannot easily be done, and not at all, by a method which all will agree with me in characterising as most contemptible.

As this is a purely *public*, and in no sense a *personal* matter, I have calmly, and without any personalities, fully answered all that seems to call for notice in your editorial.

Your reference to "Hysteria," "Hyperæsthesia," etc., are entirely out of place, as is also your use of the term "Valley of Despair." I have no anxiety or fear of any kind for the future, for I think far too highly of the innate sence of justice on the part of the Public, the Legislature, and the Medical Profession of Ontario, to be in the least afraid that the wrongs now complained of by our Independent Medical Colleges will be of long duration.

I think highly enough of the University of Toronto also, to hope that at no distant day she will again be in Medicine an examining and degree-conferring body only, having every one of our Medical Colleges affiliated with her, each of these having *one*, and by law (like the law of the Medical Council) *only one* representative on her Senate. *Then*, the University would be *equally* interested in *every* Medical College, and the interest would be reciprocal, and a far better state of things would be established than the present, which by seeking to have *unfair* advantages secured to *one* teaching body has given rise to much ill will and heartburning, which, but for this, never *would*, as it never *should*, have arisen. Under such circumstances, any public Laboratories which the Government may erect would be conducted, as they should be, by teachers just as much interested in one medical college as in another, and be thus truly *Provincial* in their scope and work.

These changes could be readily effected without injury to the recently constituted "Medical Faculty" of the University. This was formed, as you say in a recent number of your journal, by taking in the old Toronto School of Medicine, and that Corporation can easily go back once more to its former and normal position. In 1854 or 1855 this same Corporation became the *Medical Department*

of Victoria University, and in 1856 it resumed its old name, and continued, as a teaching Medical School, working cordially with other teaching colleges up to 1887, when it became once more a "University Faculty," this time, that of the University of Toronto.

In law, the corporation of the Toronto School of Medicine is still in existence, and any day a majority of its members may if they see fit, make still another change, and set up the old school on an independent basis under its old name—and who knows but some day in the near future this may happen again, as it did before.

Faithfully yours,

WALTER B. GEIKIE.

Toronto, June 17th, 1890.

To the Editor of the CANADA LANCET.

SIR,—I have forwarded the following letter to the *Canadian Practitioner* for publication :—

Editor *Canadian Practitioner*,—I have read carefully some recent editorials in your journal, and also a letter in reply by Dean Geikie, will you kindly grant me space sufficient to make a few remarks in reference thereto. The personalities made use of in your editorials, no doubt thoughtlessly and in a moment of irritation, are surely to be regretted. The members of our profession will certainly resent such attacks upon a man who has devoted his lifetime and life's energies to the advancement of medical education in the Dominion, and who has grown grey in the services of the profession—not to speak of the fact that he is at the head of a College occupying the proud position of Trinity and which so many of our profession are proud to own as their *alma mater*. Such methods of debate will, I assure you, only induce the friends of Trinity to draw more closely together and to rally more enthusiastically for the struggle against injustice and unequal rights. In your latest editorial you say : "Surely no one will contend that our great Universities in all parts of the world are absolutely to close their doors to all young men who commence the study of law, engineering, agriculture or medicine." Now, I contend that the circumstances of every country must largely govern its political economy and that you should confine yourself in this discussion wholly to our own Dominion. Secondly, I wish to contend that, owing to the circumstances of our country, the professions of law and medicine do not occupy the same relation to our subsidized universities as do the professions of Engineering and Agriculture. Engineering should be aided by public funds because the profession is not overcrowded. There is as yet a very poor field comparatively for engineers in Canada. So with farming. We are a farming country and scientific farming is a desideratum which is very much needed and very loudly called for, and every farmer who can be induced to study Agriculture scientifically is a clear gain to Canada. Not so with Law and Medicine. These professions are greatly overcrowded and, besides, it has been proved that the educational requirements in each case can be fully supplied by Independent Colleges without any public assistance. To the reflecting mind it is surely very erratic logic which endeavors to prove that the government of a country should be called upon to supply a demand which does not exist ; that the public funds should be used to furnish an article which is not only not in demand but which is actually a glut in the market. Now, please do not misunderstand me. When I speak of this article, the supply of which is immeasurably in excess of the demand, I refer, not to the half-educated young physician, but to the gradute who has been thoroughly and scientifically trained.

Now let us admit for the moment that public subsidizing is a necessity for the advancing of medical education in our Province and in the light of that admission let us consider briefly the existing condition of affairs. You say in a recent editorial, "If she (Trinity) recognizes the great advantages of the Chemical and Biological departments of the University why does she not show a willingness to participate in the benefits to be derived therefrom ? They have been offered to her —we believe they are still free to her." It is not my custom, nor is it now my intention to accuse a gentleman whose opinions may be at variance with my own, of wilful misrepresentation ; yet, to my mind it is simply inexplicable that you who must understand so well the present status of affairs should so represent it in the extract just quoted from your editorial. In the annual calendar of the Medical Faculty of Toronto University which I have before me, I read the names of certain teachers, whom we were in the habit of considering

as members of the Arts and Science Departments of our Provincial University and who as such are certainly salaried by the State; and yet they are represented in the Medical Calendar as members of the Medical Faculty. This Calendar is sent to intending medical students all over Canada in order to show them the supposed advantages possessed by this Medical Faculty over all other teaching institutions of a similar kind. And yet "these advantages are free to Trinity!" Yes, forsooth, if she is willing to surrender her students to a competing rival, but certainly not otherwise. By what exclusive right are the names of these Province-paid gentlemen paraded upon the list of one particular Medical Faculty? Why has not Trinity an equal right if right it be at all? Why cannot Trinity say to her students, "The Schools of Science and Biology are open to all students of medicine and all are taught there upon equal terms and by Professors who, being paid by the Province, have no connection whatever with any Medical Faculty. Suppose a student of Trinity or of any Independent College desired to take advantage of these alleged Provincial Institutions, as at present constituted, his name would at once be added to the list of students of the Medical department of Toronto University, an Institution competing actively for patronage with the Independent College at which it was his desire and intention to pursue his purely medical studies. Moreover, I find that the fees which this supposed student would pay for instruction in this "Provincial Institution" would go, not to the gentlemen who taught him, (they are paid by the public funds), but directly into the coffers of the Medical Faculty. Now, I ask you in all candor, is this not a fair statement of fact? And yet, it is said that "these advantages are free to Trinity!" I am willing to leave that statement to the unprejudiced reflection of the members of our profession and of all fair-minded and honorable gentlemen.

H. S. Bingham.

Cannington, July 15th, 1890.

Antipyrin in Whooping-Cough.—This remedy is said to be almost a specific in whooping-cough. If so, it will replace sulphurous acid fumigation which may also be said to be a specific, but troublesome of application.

Selected Articles.

ON THE DIAGNOSIS AND TREATMENT OF METRORRHAGIA.

Everyone engaged in the daily routine of practice must frequently have met with cases of severe uterine hæmorrhage which puzzled him not a little, both as to their diagnosis and treatment, caused him much anxiety and worry at the time, and possibly led to much unpleasantness. With the hope of throwing some light upon the nature of these difficult cases, I offer the following remarks, trusting they may prove of service to some.

Of all the organs of the body, the uterus alone is subject to periodical hæmorrhages as a natural physiological process, during some thirty years of the individual's existence. The function is influenced by many and various conditions, both general and local, often exceedingly difficult to understand.

Menorrhagia must not be regarded as a disease or entity *per se*, for which one method of treatment is universally applicable, nor is it necessarily an invariable evidence of disease, for it may be merely an expression of constitutional or general vascular tension, the uterine mucous membrane acting, so to speak, as a safety valve, the hæmorrhage being positively beneficial, and affording us a useful hint as to treatment.

In attempting to deal with these cases, our first object should be to arrive at a correct diagnosis of the predisposing and exciting causes, for, until this be determined, any treatment must be empirical, and we are just as likely to be doing harm as good in attempting to repress the hæmorrhage by ordinary routine treatment.

The principle of diagnosis by exclusion is one which approves itself to many, and for general purposes is to be commended, determining, in fact, to what cause the loss is not due. This, of course, can only be doneby knowiug beforehand what are the most likely causes of severe uterine hæmorrhage—the possibilities, so to speak—and then eliminating one after the other, until we have left only two or more probabilities. It is more especially in attempting to deal with a symptom like this that we see the importance of the gnæcologist being a good all-round general practitioner, with special experience in uterine disorders, not a mere specialist, who can see nothing amiss in a patient except through a vaginal speculum.

Before attempting to make a local investigation of the pelvic organs, we should be careful to exclude any general constitutional conditions, such as are not infrequently met with from impairment of the function of the heart, liver, or kidneys, aggravated, it may be, by the injudicious employment of alcohol, which had been prescribed with a view of relieving the more distressing symptoms.

Some of the most difficult cases, as regards diagnosis, occur at or about the so-called climacteric period. Terminal floodings are by no means infrequent. A patient becomes irregular, passes over an interval of several months without seeing anything, and then has profuse uterine hæmorrhage. This may merely imply the lessening of arterial tension at the surface of least resistance —Nature's method of affording relief—or it may be evidence of hepatic congestion due to the abuse of alcohol, a miscarriage, or the first indication of commencing malignant degeneration of the cervix uteri.

We should always endeavor to get as clear and concise a history as possible, but be careful to elicit facts and not be misled by theories. Having satisfied ourselves, so far as possible, that the hæmorrhage is due to some local and not constitutional condition, we must then endeavour to determine the exact nature of this lesion.

Speaking generally, the most frequent local cause, of metrorrhagia will be found to be threatening miscarriage ; retained products of conception from incomplete abortion, or retention of a small portion of placenta ; subinvolution with granular erosion or laceration of the cervix uteri ; villous endometritis ; hæmatocele ; new growths in the form of polypi, fibroids, or malignant disease of the fundus or cervix uteri ; retroflexion of the uterus, with or without prolapse of one or both ovaries.

Exceptionally we must not overlook the possibility of extra-uterine gestation, cystic degeneration of the villi of the chorion, and inversion of the uterus. The mere fact of a patient going even a few weeks beyond the ordinary time at which the menstrual period should have recurred, and then coming on profusely unwell, should put us on our guard as to the possibility of a miscarriage.

If pain of a colicky nature on either side of the abdomen has preceded the loss, ectopic or extrauterine gestation should be suspected, and the symtoms carefully inquired into. The presence of some enlargement behind or to one side of the uterus would still further point to such a condition being present.

In case of hæmatocele the attack occurs, more or less suddenly, at or about a menstrual epoch, producing well marked symptoms of shock, fainting, and pelvic discomfort. There is generally a history of chill, as from sitting on damp grass or getting wet, undue or prolonged fatigue or other likely cause of that nature.

Any one of the causes mentioned being sufficient to cause excessive loss, it follows that a concidence of two or more of these conditions will be still more likely to keep it up ; and herein lies an important hint for treatment.

A patient may be the subject of intramural fibroid of the uterus for years without necessarily suffering from excessive loss, but if as not infrequently happens, the endometrium becomes affected with villous degeneration metrorrhagia often becomes a marked symptom.

Where hysterectomy is not deemed advisable, or the patient refuses all idea of operation, cureting the uterine cavity or applying some strong styptic may effectually prevent the recurrence of profuse hæmorrhage, and thus prove of much service in removing the symptom for which we were consulted. Again, a patient may have had a fibroid tumour for years without any very urgent symptoms, but errors in diet, and undue stimulation by alcohol, may induce severe hæmorrhage. Careful attention to the former and abstention from the latter, may make all the difference as to the loss incurred.

Treatment.—A correct diagnosis being the first and most important element of treatment, it follows as a matter of course that having ascertained the presumed cause we know then what our plan of action should be. Still there are some practical hints which may be found to be of value to some. Where the hæmorrhage results from constitutional or general conditions it is not always wise to attempt to check the flow at once, unless it is producing such an effect upon the system generally as to suggest the expediency of arresting it at all hazards. In certain cases of heart disease, uterine hæmorrhage, in place of aggravating, seems to relieve the cardiac symptoms, and should not therefore be hastily repressed. Strophanthus, digitalis, and aconite here prove most useful. Where the action of the liver seems to be at fault, attention to diet, abstention from alcohol, and the adminstration of a few grains of calomel or pil. hydrarg. or euonymin, followed by a brisk saline aperient, will probably be indicated. If albuminuria be present, or the kidneys seem to be at fault, encourage vicarious action of skin and bowels by means of diaphoretics and purgatives, and follow out any other indications suggested. In cases of menorrhagic chlorosis, bromide of potassium in half-drachm doses has proved of service, iron being given between the periods with strychnine ; attention being also given to ordinary hygienic details, aviodance of tight lacing and physical overwork. It is well to remember that hæmophilia, scurvy, malaria from residence in damp or marshy districts, lead poisoning, and other unusual conditions will occasionally explain the presence of metrorrhagia. The mere recognition of the cause will be at once a suggestion as to the proper course of treatment.

Where uterine hæmorrhage persists, notwithstanding the employment of constitutional measures, and there is no apparent local cause to account for it, we should without further delay dilate the cervix uteri and explore the interior of the uterus. Numerous instances have been recorded of patients dying from uncontrollable hæmorrhage, where a

post-mortem examination revealed the existence of some intra-uterine growth, such as a polypus or submucous fibroid, retained product of conception, or fungoid condition of the endometrium, which could readily have been removed or dealt with had appropriate measures been adopted in time, and the patient's life thus saved.

The mere fact of inserting a sponge tent into the cervix uteri arrests the hæmorrhage for the time being, and facilitates subsequent exploration of the uterine cavity. As to any risk of reflux through the Fallopian tube, as sometimes spoken of, it is a mere visionary objection, and need not deter us from employing dilatation in suitable cases. Plugging the vagina is a very unscientific procedure, as well as being unsatisfactory and inefficient. It should seldom, if ever, be resorted to.

It would clearly be impossible in these brief remarks to indicate in detail the methods of local treatment, such as cureting for villous endometritis, removing polypi, operating for cancer, the use of electricity in cases of myoma, the best method of dealing with cases of incomplete abortion, or replacing an inverted uterus. If we have once clearly made out the indications for treatment the rest is merely a matter of detail. But now and again instances occur where no assignable cause, either constituional or local, can be made out, and where remedies fail to restrain the hæmorrhage. In such cases the hot vaginal douche may prove of service, or even washing out the uterine cavity with hot water through a double current catheter, provided the cervix be patulous enough to admit it. Should this fail it may be considered requisite to wash out the interior of the uterus with a strong solution of iodine or iron. As a *dernier ressort*, the insertion of a sponge tent into the cervix uteri may be effected.

The reliable remedies at our disposal for checking or arresting uterine hæmorrhage are really very few. Ergot is unquestionably one of our most potent; hydrastis Canadensis is a valuable agent, and far too little generally known. In cases of myoma it often proves of service when ergot has failed. Hamamelis, which forms the basis of the American nostrum hazeline, is sometimes useful. Quinine and strychnine, alone or in combination, often succeed in checking or arresting hæmorrhage in those cases where the system is much depressed from repeated or prolonged losses. Bromide of potassium in cases of ovarian irritation, and even in hæmatocele, possesses the power of checking hæmorrhage equal, if not superior, to that of any remedy we possess. Chlorate of potash in combination with ergot has lately been strongly recommended. Opium is beneficial in cases where the loss already has been severe. Sulphuric acid and opium used to be, and still is, with some practitioners, a favorite remedy; so, also, actetate of lead and opium in form of pill.

The ordinary astringents, such as gallic and sulphuric acid, have really very little influence in restraining hæmorrhage, and are far too often relied upon. Iron is often of much benefit in those cases where the loss has been very profuse, as in myomas, and the blood has become so attenuated as to pass readily through the capillaries. Digitalis, in combination with iron, proves most valuable in cardiac complications.

In place, however, of attempting empiracally to deal with the effect, we should always endeavor to arrive at a definite opinion as to the cause of the hæmorrhage, and, if we can deal with this satisfactorily, the treatment is very simple.—A. W. Edis, M.D., F.R.C.P., Lond., in *Br. Med. Jour.*

A FEW SUGGESTIONS ON THE TREATMENT OF DISEASES OF THE EYE AND EAR.

I am prompted to make these suggestions by a knowledge of the fact that by far the larger number of patients with eye or ear disease, fall under the care of the general practitioner, who in student days, found these subjects not only dull and uninteresting, but complicated—hence he has simply attempted to get the general principles, without a thought of obtaining a thorough mastery of the subject—a thing difficult of accomplishment, when professor and text-book both dwell so much upon details. I felt this keenly myself when in general practice, and have heard frequent reference to, and seen many illustrations of it, since I devoted special study to these diseases. I shall, in a general way, and briefly, attempt to give simply the treatment of those diseases most frequently seen, by suggesting the use of a few remedies which will be useful to the greatest variety, and hurtful to but few, or none of those diseases liable to be mistaken for one another.

The most frequently observed disease of the eye, is *catarrhal conjunctivitis*, or ordinary "cold" of the eyes, which with simple cleanliness is, in many instances, a self-limited disease. A cure can be hastened however, by local applications; and in the choice of these, preference should be given to the milder forms of eye-washes, for they are in nine cases out of ten equally as efficacious as the stronger applications. They are not unpleasant to the eye, and can do no harm. If inflammation of the eye (conjunctiva) assumes an active type, there is apt to be hyperæmia of the iris, which readily passes into inflamation of that structure, under the influence of strong applications to the lid or globe; and the same may be said of the cornea—hence the safety of mild remedies, and the danger of strong ones. Either of the following prescriptions will meet the indications of a mild eye-wash:

1. A solution of common salt (grs. x ad ℥i).
2. A saturated solution of boracic acid (grs. xv ad ℥i).
3. ℞ Sodii biboratis ℈ iv, aquæ camphoræ, aquæ, aa ℥ii. M.
4. ℞ Zinci sulphatis gr. i, acidi boracici ℥i, aquæ ℥iv M.

These may be freely applied to the eye, without fear of harm. As examples of what I consider the stronger eye-washes, I may cite solutions of copper, of zinc, of alum, of nitrate of silver, of acetate of lead, as strong as five or ten grains to the ounce.

The next disease of the eye in order of frequency is inflamation of the cornea, or *keratitis*, which is sometimes associated with catarrhal ophthalmia just considered, and in many instances the casual observor will place the two diseases in the same category. And yet, the strong applications, which the inflamed conjunctiva would stand, not only with impunity, but with marked benefit, might seriously endanger an eye affected with keratitis. Here treatment *must be mild*, if safety of the eye is consulted. Any one of the prescriptions which I have suggested can be used with benefit and without danger, and it is well to use in addition some soothing application, as ℞ Atropiæ sulphatis, cocain. muriat. ää gr. ii, aquæ ℥i. M. Sig. Put two drops in the eye three times a day.

Another disease of the eye—inflammation of the iris, or *iritis*—is often seen, and it too, has so many symptoms in common with the diseases already considered that it is liable to be mistaken for either. Here all the usual eye-washes are objectionable—their danger increasing with their astringency. The prescriptions which I have given, are at least open to this objection—and while they can do no good, they can hardly be considered as dangerous. The sheet-anchor here, is atropia, which can be advantageously combined with cocaine, four grains each, of cocaine and atropine to the ounce of water. This should be used sufficiently often to keep the pupil dilated, and until the eye is free from redness. Attention of course should be given to the general health in every instance. Either the syphilitic taint or the rheumatic habit will usually be found with iritis. Whenever the eye-ball is red and inflamed, with dread of light, or haziness of the cornea or a contracted or sluggish pupil, rely upon atropine and cocaine, and use no stronger application than a solution of boracic acid. When an absence of these symptoms shows that the trouble is in the lids, stronger applications are admissable.

A few points about diseases of the ear, and I shall cease.

Ordinary *ear-ache*, is an inflamation of the middle ear, and when the process goes on to pus-formation, an absess on the inner side of the drum membrance is the rasult. The pressure from the pent-up pus causes a rupture of the drum, through which the matter escapes. This is often an end to the trouble, but frequently the inflamation continues—the opening in the drum remains—disease of the bones of the ear. develops, and a more or less continuous discharge, an otorrhœa, is the result. If hot water be liberally and frequently injected into the ear through a douche, the inflamation will usually be stopped and a cure effected. Two or three drops of hot laudanum dropped into the ear will often accomplish the same purpose. After the discharge appears it can ordinarily be checked by syringing the ear often enough to keep it clean, with warm water containing boracic acid in the proportion of fifteen grains to the ounce; and, if, in addition to the syringing, a liittle pulverized boracic is blown into the ear through a quill or tube, after the ear is cleansed, this treatment will usually suffice to cure an otorrhœa.

In removing plugs of wax, or foreign bodies which have gained access to the ear, it is better to rely upon warm water and a syringe, than to resort to instruments. It is not only easier but more efficacious and safer. With the most delicate touch, it is as difficult to handle an instrument with precision in the deep and small cavity of the ear, as it is to avoid inflicting injury to these delicate parts which may be more serious than the trouble for which it was undertaken.—Dr. James L. Minor, in *Memphis Jour. of Med. Sciences.*

INSOMNIA AMONG CHILDREN.

Sleepless children have a champion in Dr. Jules Simon, who takes up their cause in the pages of the *Revue mensuale des maladies de l' enfance* for March, 1890. The problem of too-wakeful childhood, he says, taxes the ingenuity of the physician to the utmost, arising as it does from many causes, and constituting a prominent symptom of diverse pathological conditions. The new baby's sleep is intermittent. Every two or three hours it wakens, because of hunger or thirst: Even night sleep is not continuous, though more profound and of longer duration. If the infant sleeps too much or too little, something is wrong. Insomia is a marked symptom of early syphilis in children, as characteristic as the coryza and rash, and normal sleep returns only when sufficient murcury has been absorbed and assimilated. Indigestion is a potent cause of wakefulness among the innocent. These are often fed too frequently and with improper food. Medicine is useless. Hygienic nourishment is the only hypnotic that meets the indications. There is, however, the hyperæsthetic baby, always alert, with eyes forever open, and who can only be quieted by a good dose of something. This alarming infant is essentially a nineteenth-century outcome.

The little sufferers from beginning hip-joint disease sleep no more till the leg is immobilized, codiene and chloral affording only temporary relief. The insomnia of broncho-pneumonia in children is best relieved by the application of a fly-blister, a remedy that makes the ignorant laugh. At once respiration becomes less frequent, oppression diminishes, and the little one sleeps. The most varied measures bring about this consummation devoutly to be wished, under different circumstances. And any agent will fail when it is not indicated, as it does everywhere in the practice of medicine.

Ætiology must ever be kept in view. The causes of childish insomnia are legion. Among the new-born, Dr. Simon places dyspepsia first on the list, and acute cerebral congestion—due to some kind of exposure—next. A beginning meningitis, cerebral tumors, and hydrocephalus have wakefulness for a symptom. In later childhood, headache produces the same result—the headache of growth and overwork. Many of these headaches are really manifestations of latent rheumatism. The neuroses of childhood, such as hysteria, chorea, and epilepsy, produce wakefulness. This is sometimes the only evidence of epilepsy, and expresses itself in a peculiar way. The child goes to bed well, wakens with cry from profound slumber, sits up suddenly in bed, and the falls back again, either to sleep, after a short interval, or to lie awake weak and prostrated. Sleepless or wakeful chorea is a serious affair. Rheumatic conjunctivitis, catarrh extending into the frontal sinuses, urticaria, itch, etc., are frequent and obvious reasons for sleeplessness. Not so hernia or displaced testicle. The rarity of these conditions make them overlooked, though existing oftener than is supposed, the symptoms they give rise to being referred to the digestive tract or the nervous system. Naturally, the whole range of nervines and digestive tonics fails to do what a simple bandage can accomplish—bring about normal sleep. The exanthematous fevers have sleeplessness during some part of their course as an accompainment. So also malarial fevers, especially of the irregular type, when the child wakes suddenly in the night with pain in the head and vomiting, withour fever or chills. Quinine cures this kind of sleeplessness. Unrecognized albuminuria is another reason why repose is disturbed; and this disturance may precede uræmia. The diptheritic patient in whom the disease has murdered sleep is in the gravest danger. Among children of six or seven, wakefulness is one of the protean expressions of lithæmia. It is often accompained by intense headache and profuse perspiration. And last, but not least, the indiscretions of the mother or wet-nurse are potent causes of the wakefulness of early infancy. Alcohol, tea, coffee, salted foods, condiments, and spiced meats may act as poisons to the baby when they pass into the milk that is its food. Strong odors, good and bad, may also keep little ones awake, for their are powerful excitants in the young.

The most careful regulation of a child's life, the most patient enquiry into the details of its every-day career, and matters worthy of the best physician's learning and skill. Grown persons are badly spoiled as a rule, and not much can be done but patch them up and let them go; but with children the case is more hopeful.—*N. Y. Med. Jour.*

ABSTRACT OF THE ADDRESS ON MEDICINE.

Dr. Davis referred to the recent changes and progress in medicine, and proceeded to ask the attention of the audience to a limited number of topics that are at present exerting an important influence on the progress of medical science. He spoke of the microscopic search for bacteria, which has recently become so popular. He said a large proportion of the bed-side practice had become little more than a clerical process, recording the temperature as indicated by the clinical thermometer, and adjusting the stimulants and food in accordance therewith, little attention being given to the condition of important secretory and execretory organs. He claimed that a general fever, instead of being simply high temperature, is a complex, morbid condition, involving all the functions of the body, the elevation of temperature being only incidental. The real value of any remedy in the treatment of acute general diseases cannot be determined by its specific effect in temporarily controlling one or two common symptoms, but the mode of its action on the general system. Physiological investigation has proved that all nerve sensibilities and molecular changes are dependent on the presence of arterial blood containing oxygen. All acute general diseases accompained by abnormal temperature include disturbance of these processes. Abundant observations and experiments on animals show that many of the favorite antipyretics produce their effects by more or less direct interference with the function of the blood. They impair the assimilative processes as shown by the diminished conversion of food into sugar in the liver and muscles and the diminution of nitrogenous elimination. He entered into an extended discussion of typhoid fever. He thought it safe to relieve the excess of heat by the natural processes of radiation, exhalation and general evacuations. This can be done by frequent sponge bathing, aided by wrapping the patient in a cold, wet sheet, which can be done with a positively refreshing influence. He referred to the effect of alcohol as used for a remedy in the treat-

ment of disease. He treated of the effect on the functions of the more important organs and the constituents of the blood and tissues.

When taken into the stomach in a diluted form alcohol undergoes no digestion, but is carried directly into the blood and some part of it is speedily eliminated unchanged through the lungs, kidneys and skin. Experiments show conclusively that about 10 per cent of the alcohol taken loses its identity immediately on mingling with the blood. A careful review shows no evidence of a marked increase in heat production of carbon dioxide by the presence of alcohol in the blood. On the other hand, the average heat dissipation has been proved to diminish. While present and circulating with the blood it diminishes nerve sensibilities of course, lessens the average temperature, retards molecular changes in the tissues and lessens the aggregate of effete elimination.

The well-known fact that alcohol possesses a strong affinity for water contained in the living tissues was discussed at length, the experiments of Drs. Richardson, Harley, Payne, Kales, Wood, Martin, Loomis, Davis, Edgerly, Townsend and many others being carefully reported. Alcohol causes less oxygen to be carried from the pulmonary to the systemic capillaries. It caused a diminished production of carbon dioxide, urea, phosphates, heat, etc. It is a true anæsthetic upon the nerve center. Instead of generating any kind or form or force of energy it actually diminished every known form of force belonging to the living body and promotes molecular and tissue degeneration. If administered in acute general diseases it quiets the patient's restlessness and lessens his consciousness of suffering, but favors the retention in the system of both the specific causes of disease and the natural excretory materials that should have been eliminated. It adds to the number of fatal results. The very generally accepted doctrine that alcohol is a cardiac tonic does not rest on the true basis of clinical experience. The nearest approach to such a basis is furnished in the reports of hospital and private practice for a given period where the diseases in question were treated without alcohol and anti-pyretics, and where both were freely used. In 1864 the Commissioners of Public Charity in New York City, on account of the great mortality of fever patients in the hospital, removed them to Blackwell's Island, where they were placed in tents. There treatment was exclusively hygienic, consisting of ample ventilation, good air, cleanliness and simple nourishment. The result was a death rate of only 6 per cent.

In the Mercy Hospital, of Chicago, over which Dr. Davis has had supervision for twenty years, the average death rate was only 5 per cent. On the other hand, nearly all the reports from hospitals in which alcoholic liquors are used in the treatment of typhoid and typhus fever the rate is from 16 to 25 per cent. The rate in Bellevue Hospital, New York, before the Blackwell's Island experiment, was one death in four and one-half. Numerous statistics were given bearing on this point. Dr. Davis said the continual use of alcoholics and anti-pyretics was not in sympathy with the progress of the age. The fundamental error consists in using special remedies for the control of particular symptoms, or the removal of specific causes without an adeqate knowledge of their influence on the blood and the various processes of the human body. The highest degree of success in the treatment of acute general diseases will be attained by removing from the patient the action of the specific and predisposing causes of his disease and surrounding him with air and perfect sanitary conditions, avoiding the use of such remedies as either directly or indirectly retard normal processes. The restoration of these processes must be aided by promoting natural elimination. Morbid conditions of the glands, spleen and stomach must be palliated so as to prevent such structural changes as might otherwise end in fatal exhaustion. The steps of healing must be carefully graded, remembering that the same remedial agent that might be of great value in one stage might be even destructive in another. Dr. Davis said that the foregoing conclusions were the result of a life work, and his faith in the efficacy of the remedial agencies had in no wise been diminished. He would feel repaid if they should lead any number of the profession to a closer understanding of the real modus operandi of the remedial agents used in the treatment of acute general diseases.—N. S. Davis, M. D., in *Chicago Weekly Med. Rev.*

THE THERAPEUTIC USES AND TOXIC EFFECTS OF CANNABIS INDICA.

A valuable contribution to the literature of Indian hemp is a paper with this title published in the Lancet for March 22, 1890, by Dr. J. Russell Reynolds. In explaining the occasional toxic effects of this drug, two things must be remembered: First, that, by its nature and the forms of its administration, *Cannabis indica* is subject to great variations in strength. Extracts and tinctures can not be made uniform, because the hemp grown at different seasons and in different places varies in the amount of the active therapeutic principle. It should always be obtained from the same source, and the minimum dose should be given at first and gradually and cautiously increased. The second important fact to keep in view is that individuals differ widely in their relations to various medicines and articles of diet—perhaps to none more than to substances of vegetable origin, such as tea, coffee, ipecacuanha, digitalis, nux vomica, and the like. In addition to the purity of the drug, the

possibility of idiosyncrasy must be borne in mind as calling for caution in giving Indian hemp. By gradually increasing the dose and habituating the organism to its use, the use of *Cannabis indica* may be pushed to three or four grains at a dose with positive advantage, But in Dr. Reynold's experience a grain would bring about toxic effects in the majority of healthy adults; and a quarter of a grain has done the same, but never a fifth, which is the proper amount with which to begin the use of the drug among grown persons, a tenth of a grain being the proper initial dose for children. The best preparation for administration is the tincture—one grain to twenty or ten minims—dropped on sugar or bread. The minimum dose should be given, as before stated, repeated every four or six hours, and gradually increased every third or fourth day, until either relief is obtained or the drug is proved useless. With such precautions, Dr. Reynolds states he has never met with toxic effects and rarely failed to ascertain in a short space of time the value or uselessness of the drug.

Its most important results are to be found in the mental sphere; as, for instance, in senile insomnia, with wandering. An elderly person (perhaps with brain-softening) is figety at night, goes to bed, gets up, thinks he has some appointment to keep, that he must dress and go out. Day, with its stimuli and real occupations, finds him quite rational again Nothing can compare in utility to a moderate dose of Indian hemp at bedtime—a quarter to a third of a grain of the extract. In alcoholic subjects it is uncertain and rarely useful. In melancholia it is sometimes serviceable in converting depression into exaltation; but, unless the case has merged into senile degeneration, Dr. Reynolds does not now employ *Cannabis indica*. It is worse than useless in any form of mania. In the occasional night restlessness of general paretics and of sufferers from the "temper disease" of Marshall Hall, whether children or adults, it has proved eminently useful.

In painful affections, such as neuralgia, neuritis, and migraine, Dr. Reynolds considers hemp by far the most useful of drugs, even when the disease is of years' duration. In neuritis the remedy is useful only in conjunction with other treatment, and is a most valuable adjunct to mercury, iodine, or other drugs, as it is in neuralgia when given with arsenic, quinine, or iron, if either is required. Many victims of diabolical migraine have for years kept their sufferings in abeyance by taking hemp at the threatening or outset of the attack. In sciatica, myodynia, gastrodynia, enteralgia, tinnitus aurium, muscæ volitantes, and every kind of so-called hysterical pain, *Cannabis indica* is without value. On the other hand, it relieves the lightning pains of ataxia, and also the multiform miseries of the gouty, such as tingling, formication numbness, and other paræsthesiæ.

In clonic spasm, whether epileptoid or choreic, hemp is of great service. In the eclampsia of children or adults, from worms, teething (the first, second or third dentition), it gives relief by itself in many cases. Many cases of so-called epilepsy in adults—epileptoid convulsions, due often to gross organic nerve-centre lesions—are greatly helped by *Cannabis indica*, when they are not affected by the bromides or other drugs. Take, for instance, violent convulsions in an overfed man, who is attacked during sleep a few hours after a hearty supper, the attacks recurring two or three times an hour for a day or two, in spite of "clearing the primæ viæ," or using bromine or some other classic drug. These attacks may be stopped at once with a full dose of hemp. In brain tumors or other maladies in the course of which epileptoid seizures occurr, followed by coma, the coma being followed by delirium—first quiet, then violent—the delirium time after time passing into convulsions and the whole gamut being repeated, Indian hemp will at once cut short such abnormal activities, even when all other treatment has failed. In genuine epilepsy it is of no avail. In cases where it has seemed to do good, the author doubts the correctness of the diagnosis and suspects organic lesion or eccentric irritation. In tonic spasms, such as torticollis and writers' cramp, in general chorea, in paralysis agitans, in trismus, tetanus, and the jerky movements of spinal sclerosis, *Cannabis indica* has proved absolutely useless. At the same time, it is most valuable in the nocturnal cramps of gouty or old persons, in some cases of spasmodic asthma, and in simple spasmodic dysmenorrhœa. Thus it will be percieved that for the relief of suffering, quite apart from a curative effect, hemp must ever be held in high esteem and ranked with the poppy and with mandragora.—*Ed. M. N. Y. Med. Jour.*

MORNING SICKNESS.

Among the many disorders consequent to the pregnant state, we find a very common and annoying one, called morning sickness. There will be times when you have exhausted every remedy that is available, that you will be put to your wits' ends to know what to do, for very frequently this trouble becomes so obstinate that nothing short of abortion will give relief. It is rare to have a fatal case of morning sickness, unless the patient is unable to receive nourishment in the various ways that I shall describe to you in this lecture. The symptoms and the probable etiology of this affection have already been considered, and it is to the treatment that I wish more particularly to call your attention this morning. Your first duty will be to make a careful inquiry as to the diet and general state of the bowels. You will

frequently find here the cause of much trouble and that having the meals at proper intervals, and the bowels regulated, nothing else may be required. If the patient cannot retain food in the stomach, begin with liquid food in small quantities. Soups, from which the grease has been skimmed, should be employed; and in addition, well-cooked farinaceous foods. There is one kind of soup that is better than all others, and acts as a medicine in some cases, that is, clam-juice soup. This will also answer in typhoid fever. After all things have failed you will find that there is an unsatisfied desire for certain things you would naturally forbid. Experiment until you find the most suitable diet. I have heard of obstinate cases that were cured simply by the patient eating popped corn, or an apple. This, of course, was merely a mental action, and not medicinal, in the sense in which we use the term. It has been found that by awakening the patient in the night and giving her a cup of hot coffee and a soft boiled egg, then keeping her quiet, the nourishment may be retained. Raw beef, scraped and made into a sandwich, is often palatable and may be retained. After all has failed by the mouth do not let your patient die for want of nourishment, but commence alimentation by the rectum. Use injections of beef peptonoids, milk and concentrated foods at regular intervals. I know of a doctor C., of Atlanta, whose patient vomited all food taken into the stomach, but she lived the whole nine months by rectal alimentation, and made a perfect recovery. I had a case of cancer of the bowels, in which the patient was sustained many months by alimentation per rectum, until the disease overcame her. The only danger to be apprehended in this mode of alimentation is that diarrhœa may set in; then she is beyond nourish-nourishment by the bowel.

What, then, are the remedies you should use? They are numerous. Among the reflex sedatives and anodynes, nothing is better than the bromides. Sodium bromide is the best, and, being alkaline, generally acceptable. Chloral is sometimes used to quiet and relieve, but I do not think it should be used unless absolutely necessary, and then late in pregnancy. Opium and morphine should be avoided on account of locking up the secretions. Great benefit is derived from soda bicarbonate and bismuth before meals, and following the meal, give aromatic sulphuric acid with syrup of ginger or lemon. Aromatic bitter tonics, or diluted hydrocyanic acid, will often give relief. You may use potassium carb., gr. v, with tr. gentian comp. and syrup of ginger, to make it palatable. One of the most satisfactory and efficient prescriptions in my hands is:

℞ —Bismuth subnitratis, ... gr. x.
Acidi carbolici, ... gr. ss.
Pepsini, ... gr. v.
Syrupi,
Aquæ menthæ piperitæ.

Misce. fiat mistura et signe: Take before meals. Shake well before using.

Oxalate of cerium, gr. ij-v, in pill form, before meals, is one of the most reliable remedies. Salicinum in gr. v-x doses is said to be very good, but I have had no experience with it. Potassium iodide answers in specific cases. Wine of ipecac, given in gtt. j doses every hour has a peculiar action on the secretions, and allays the irritability in many cases. Creosote in gtt. ij doses has been replaced by carbolic acid given in lime water. Phosphate of lime, gr. xv-xx, tinct. iodii. comp.; Fowler's solution; nux vomica, and last of all, cocaine hydrochloras, gtt. x of a 3% solution, have been used. After you have used the various remedies, and have gained nothing, look after the position of the uterus, and, if displaced, replace it if possible, and thus afford relief. Sometimes a peculiar position of the fœtus in the uterus will give rise to the trouble. Certain conditions of the cervix, such as fissures, granulations, erosions and inflammations of the os uteri and cervix must be treated locally in order to give relief. As an example of a reflex trouble, there is a case of a woman who was seized with convulsions after childbirth, on account of a few shreds of fibres protruding from the cervix, the removal of which gave relief. Use local applications of nitrate of silver, carbolic acid, tincture of iodine or nitric acid, according to the demands of the case; but do not make the applications strong enough to produce pain. Another cause of the nausea may be contraction of the cervix. This can be overcome by slight expansion of the external os or cervix by the finger or dilator, exercising the greatest care. This is a point worthy of your notice. When every remedy at your command has been exhausted, request a consultation with a physician whose judgment will be a credit to you, whose experience, judgment and wisdom are known to you and the profession, and if the induction of abortion be necessary to save the life of your patient, you have him to share with you the responsibility of the case.—Dr. Stewart, in *Times and Register.*

TREATMENT OF GASTRIC NEURASTHENIA.

In the treatment of dilatation of the stomach, according to Dujardin-Beaumetz, there are two principal indications: the one is addressed to the gastro-intestinal disturbances, the other to the condition of the nervous system. To fulfil the first of these indications there are two plans of treatment: the first comprises intestinal antisepsis; the second includes various mechanical meth-

ods of treatment which act directly upon the stomach.

Intestinal antisepsis has for its object the prevention of the development of toxic substances in the digestive tube, and is accomplished by pharmaceutical means, by laxatives, by washing out the stomach and intestines, and by properly chosen regimen. The following measures should be observed:

1. The patient should take one of the following cachets at each mealtime:

Salicylate of bismuth . .	āā 10 grm.
Magnesia	
Bicarbonate of soda . . .	

For 30 cachets.

If the trouble is very far advanced:

Salicylate of bismuth . . .	āā 10 grm.
Naphthol (a)	
Magnesia	
Bicarbonate of soda . . .	

For 30 cachets.

2. At bedtime the patient should take a dessert-spoonful of the following in half a glassful of water:

Senna pods (treated with alcohol) in powder	āā 6 grm.
Sublimed sulphur.	
Powdered fennel	āā 3 grm.
Powdered anisum stellatum.	
Pulverized cream of tartar. .	2 grm.
Powdered licorice	8 grm.
Powdered sugar	25 grm.

When the powder does not produce the desired effect, or is not well borne, the patient should take a liqueur glassful of Rubinat or Villacobras water every morning, or else a dose of podyphyllin or cascara. If there is considerable dilatation the stomach should be washed out; and if it contains putrid matter, disinfecting solutions should be employed, such as boric acid, 10-1000 or naphthol (a), 1-1000.

3. The cold douche should be applied to the spinal column every day for not longer than 15 seconds (if the patient is a lady, the feet should be douched with hot water, and after the douche dry friction should be vigorously employed).

4. Open-air walks and muscular exercises are favorable.

The following dietetic points should be carefully observed: At least seven hours should intervene between the two principal meals, which should be eaten the first at 10 or 11 a.m., the second at 7 p.m.; neither food nor drink should be taken between meals; diet should consist chiefly of eggs (underdone), purées of potatoes, haricots, lentils, revalescière, racahout, lactated farina, panada, rice, maccaroni, green vegetables, well cooked (purées of carrots, turnips or peas, Julienne soup, cooked salads, spinach), finally, stewed fruits, except grapes or strawberries; game, fish, shell fish, cheese, and all foods that are too liquid, particularly thin soups, should be excluded; bread should be toasted; as for drinks, nothing should be taken except 300 grm. of a mixture of white wine and water, but no effervescing drinks, undiluted wine, and no liquors should be taken. It may be remarked that wine of cinchona, such as is frequently given as a tonic to patients with dilatation of the stomach, is more injurious than useful.

The mechanical methods of treatment referred to include Glénard's pelvic bandage—a broad elastic bandage which is strapped over the abdomen—massage, and electricity.—*Jour. Am. Med. Assoc.*

THE TREATMENT OF EPILEPSY BY BIBORATE OF SODA.

I can fully endorse the statements of Drs. Risien Russell and James Taylor in their interesting paper which appeared in *The Lancet* of the 17th inst., with regard to the value of borax in the treatment of epilepsy, and I agree with them as to the necessity for emphasising this fact; for although here and there in medical literature it is recorded that fits have been cured by borax, the virtues of this remedy have for the most part been either ignored or under-estimated. Yet I think there can be no doubt that when the bromides, administered either alone or in conjunction with belladonna, fail to relieve convulsive seizures, biborate of soda is the most likely drug to be of service. And I would also point out that boracic acid, so far as I have tried it, appears to be quite as efficacious as its alkaline salt. Its value is strikingly illustrated by the following case which was under my care at the Clinical Hospital about two years ago. It was that of a girl aged six years, who had been subject to fits for a few weeks which the mother attributed to a fall on the head. The child attended as an out-patient for some time; but, as the fits appeared to be uninfluenced by the administration of bromide of potassium, she was taken into the hospital in order that the effects of treatment might be more accurately observed. During the first five days she took, every four hours, a mixture containing five grains of bromide of potassium and five minims of tincture of belladonna; but on each day she had from twelve to twenty attacks of general convulsions with loss of consciousness. The doses of bromide and belladonna were then increased to ten grains and seven minims respectively; but as the frequency of the fits remained unaltered, she was ordered to take five grains of boric acid in water every four hours. During the next four days the number of fits fell

to nine and ten daily, and when the dose of boric acid was increased to ten grains the improvement was still more marked; the fits ceased on the fifth day, and the child subsequently left the hospital completely cured. Since that time I have repeatedly prescribed boracic acid and borax, both for ordinary epilepsy and for the convulsions associated with the spastic hemiplegia of infancy, and, as a rule, with good results.

As regards the mode of administration, it may be observed: (1) that both borax and boric acid are very soluble in glycerine; (2) that if we wish to prescribe borax alone, much glycerine should be excluded, for a mixture of pure neutral glycerine and pure borax is acid, owing to the presence of free boric acid; (3) that borax increases the solubility of boric acid to a considerable extent, so that it is often advantageous to give them in combination.

In conclusion, perhaps you will permit me to draw attention to the occasional value of borax or of boric acid in the treatment of coughs. A few grains of either drug will sometimes remove an obstinate cough in a young child, and especially if this be associated with an irritable condition of the fauces or pharynx. Boric acid is also highly spoken of by Atkinson* as a remedy for puerperal fever; Bukhaloff† considers it a very effective substitute for quinine in the treatment of malarial fevers; and Peyrusson‡ recommends large doses in cholera.—Judson S. Bury, in *Lancet.*

PREGNANCY CYSTITIS.

An eighteen-year-old primipara was delivered ten months ago. In the third month of pregnancy she suffered from frequent dysuria. She had to empty the bladder at least ten times daily, and several times at night. The dysuria has continued ever since. The urine is cloudy and alkaline; sp. gr. 1,016. It contains bladder epithelium and pus.

Cystitis in pregnancy, while not frequent, is not rare. Pregnancy nephritis has been described and so there is a pregnancy cystitis, but the latter is more frequent than the former. Monod found that 26 out of 124 pregnant women suffer from cystitis; 16 of the 26 were primigravidæ. In his opinion pregnancy cystitis is chiefly due to vesical hyperæmia, caused by the close vascular connection between the bladder and the uterus; the blood supply of the latter being naturally much increased. The frequent excessive intercourse of the newly married contributes in no small degree to vesical inflammation. Under the title pregnancy cystitis are not included those cystites due to retroversion or retroflexion of the gravid uterus, after it has become incarcerated; spontaneous evacuation of the bladder being impossible, it becomes enormously distended and sloughing with fatal consequences may result, or at least permanent vesical disease.

In the treatment of cystitis, medicine given by the mouth which must be eliminated by the kidneys, to affect the vesical mucous membrane, can be dispensed with. Washing out the bladder by means of suitable solutions or mixtures gives the best results. The irrigation should be done with Hager's funnel, to which a rubber tube and the catcher have been attached. The funnel tube and catcher are filled with the preparation to be used. The funnel is held so low down that the fluid cannot escape through the catcher previous to the introduction of the latter. The catcher is introduced, then the funnel is raised, and the fluid passes gently into the bladder. After the quantity judged necessary has entered, the funnel is lowered and the bladder is at once emptied. The fluids used vary. Braxton Hicks advises the use of slightly acidulated warm water; one or two drops of hydrochloric acid to the ounce of water. I have used a mixture of creolin and water with good results. I used at first a two per cent. solution, but found that this caused discomfort to many patients. It is better to begin with a solution one-half as strong, or even weaker. The fluid used should be warm. —Parvin, in *Med. Standard.*

* Practitioner, 1880. † Vrach, 1888. ‡ Lyon Med., 1884.

Laceration of the Cervix, Immediate Repair of.—Recent experience with this operation has been so favorable that I deem it worth while to lay the method briefly before you.

The operation may be done in Sim's position. I prefer the dorsal decubitus, with the patient's hips at the edge of the bed and the legs held well flexed by the sheet-sling, which is a simple substitute for the various clutches (*N. Y. Med. Jour.*, April) (a drawing was shown). The lower corners of the tear are seized in the grip of a single pair of double tenaculum forceps. The extent of the tear is thus seen and the rent steadied for stitching. This is the one point on which I wish to lay stress. A needle-holder and straight needles, or this modified Peaslee needle bent at right angles and curved like a Hagedon, serve well. Trustworthy gut is best, but I have been using ordinary No. 8 cotton thread, soaked in biniodide solution, 1-4000. No assistant is required beside the nurse.

Objections.—Several theoretical reasons will occur to you at once why this little operation may be difficult in ordinary cases.

1. The flabby vaginal wall may fall in and hamper all manipulations.

2. The bell shape of the cervix after labor might fog any working ideas of the normal relations.

3. The "reach" is too long.

4. Blood may pocket in the vagina and hide the sutures, in a way even more annoying than is the case in the perineal operation.

Whereas, The local conditions are as follows, in reality :

1. The vaginal walls have been over-distended so recently that they are held back without much trouble.

2. The cervix is so long and flabby that it is easy drawn into view. After long labors the anterior lip is often visible at the vulva. It is after long labors that rents are most commonly found, and it is only for lacerations extending to the vaginal wall that the operation is proposed.

3. The seizure on both sides of the laceration checks hæmorrhage. This cessation is so distinct as to be somewhat surprising, and it seems to point to the cervical vessels as the source of the bleeding in those cases where a firmly contracted uterus bleeds. In two of my cases the flow was very free until the cervix was caught, when it ceased at once.

One other consideration deserves mention. The involution of the uterus has been remarkably rapid and complete in all these cases, the cervix particularly regaining a nulliparous size in less than three weeks.—Dr. Dickinson, in *Brooklyn Med. Jour.*

PULMONARY RESPIRATION.—M. Cohr, of Copenhagen, sums up the results of his researches on this subject thus :

1. The tension of the gases in the arterial blood and in the expired air, is such, that the difference in pressure on opposite sides of the walls of the air vesicles, can not be the cause which determines the passage of the gases through the lung tissues.

2. This fact manifests itself especially during the inspiration of air containing carbonic acid.

3. The tension of carbonic acid and of oxygen in the arterial blood, varies very much in different individuals placed under identical external influences ; it may even vary with the same individual without any appreciable change as to external conditions having occurred. We can therefore consider the absorption and elimination of gases in the lungs as analogous to the phenomena comprised under the name of glandular secretions. Like other organs, the lungs cannot exercise their special function, except within certain limits marked by external physical conditions. This is shown by exposing the organism to air poor in oxygen but rich in carbonic acid. Outside of these extremes, the special action of the pulmonary tissue is the principal course determining the tension of gases in the blood.—*La France Med.*

FOR SWEATING FEET.—It is said that a solution of permanganate of potash, gr. 20 to the ounce, is an efficient application in hyperidrosis of the feet.

EVERY physician has some peculiarity or "fad," call it what you like, in treating the cases which come before him. Some are always on the *qui vive* for brain cases, others for heart lesions, others lung mischief, others liver troubles, while some are very sweet on the supra-renal capsules. It is the same with drugs, one cures everything with pot. iodide ; another is equally successful with hydrarg. perchlor. ; and a third gets splendid results with mag. sulph. and peppermint water. "The *primæ viæ*, gentlemen must be kept clear." A second year's student at one of the Metropolitan hospitals has in the following lines noted a few of the stock "wheezes" of the physicians he is studying under :—

"If in your mind suspicion lurks,
Get a hammer, try their jerks."

"If palpitation wildly start,
Percuss and auscultate the heart ;
All arterial tension try ;
'You'll be better by-and-bye.'"

"If in the stomach there be pain,
Give gentian, and say, 'Call again.'
If still the patient wildly cuss
His coccygeal gland percuss,
Its area marked in pencil blue
Should satisfy the veriest Jew.

"Ere this case be carried off
Be sure and auscultate the cough ;
Fluid lurks, if doubt there be
Stick a needle in and see."

"Digestion wrong, and brain all clogged,
The man is simply water-logged.
His bowel in its duty halts,
Just give a dose of Epsom salts ;
His brain can stimulated be
By sunshine and some *eau de vie.*

"'Your case could better treated be ;
Leave all G.P.'s and follow me.'
(*Aside*) When in my hand the fee is press'd,
Nature will do all the rest."

"You're hurried in the mortal race,
. . . .
By business cares you are oppress'd.
A diet sheet I would suggest.
It seems of all my glorious race
I'm privileged to treat this case ;
And if in treating of the same
I gain a grand and glorious name,
My fame for aye it shall endure—
For constipation I can cure."

The author does not append his name or state the particular hospital to which he is attached, from which we assume that he is not inclined to give any assistance in the identification of the gentlemen referred to.—*Hosp. Gaz.*

AS IT WAS THEN.—A statute of Henry VII, says an exchange, runs as follows :—The practice of the healing art should be limited to those persons that be profound, sad and discreet, groundly-learned and deeply studied in physic.

The Septic Germs in Peritonitis.—We have recently had occasion to refer to the distinctions between septic and simple peritonitis, and to note how Dr. Bumm, of Würzburg, has shown that the streptococcus is most deadly when taken from peritoneal fluid in the early stage of puerperal peritonitis. Dr. Orth has shown that the septic influence of undoubtedly septic germs is more strongly modified by certain pathological conditions than even Dr. Bumm's researches would lead us to suppose. Although strong infusions of "pure cultures" of staphylococcus pyogenes aureus or streptococcus pyogenes injected into the peritoneal cavity of rats, etc., failed to cause any lesion of the peritoneum, the same amount of germs caused deadly results when mixed with material which could not be absorbed, or which could only be absorbed slowly. Disease of the peritoneum, already existing favored the action of the germs; in ascitic animals a very small quantity of staphylococcus caused septic peritonitis. The same result followed when any intra-abdominal structure was wounded, even when a piece of mesentery was excised, or a spot cauterized. When a piece of gut was ligatured, with precautions, for six hours, no bad results followed, but when ligatured for a shorter period with consecutive injection of staphylococcus fatal peritonitis followed. These experiments show the grave consequences which may follow the introduction of germs into the peritoneum after abdominal operations, especially if that serous cavity is not kept clear of effused fluids and solid particles. Rapidly fatal peritonitis followed the injection of staphylococci into the blood, or into a compound-fracture wound in cases where the intestine was ligatured.—*Brit. Med. Jour.*

Prescription for Psoriasis.—The favorite prescription of Mr. Jonathan Hutchinson for psoriasis is:

℞.—Acid. chrysophanic - - - gr. x.
Liq. carbonis deterg. - - - ♏ x.
Hydr. amm. chlorid. - - - gr. x.
Adip. benzoat. - - - - - ℥j.
Misce, fiat unguent.

At night the patient should wash the diseased surfaces free from all scales; then, standing before a fire, rub on the ointment, devoting, if possible, half an hour to the operation. This proportion of chrysophanic acid is not irritating, and stains the linen but slightly. With some cases, even a weaker chrysophanic ointment is entirely sufficient. Internally, Mr. Hutchinson prescribes arsenic, though he is not convinced that it is an important adjunct.—*Archives of Surgery.*

Creasote in Diabetes.—Dr. P. Valentine (*Med. Rec.*) says he has had good results in diabetes mellitus, from the administration of creasote. The amount from four to ten drops a day.

The Coccidium in the Eggs of Fowls.—A note in the *Bulletin of the United States Marine-Hospital Service* of May 23rd, translated from *La Rivista Internazionale d' Igiene*, Naples, April, 1890, says that Professor Podwisotzky, of the University of Kiel, Russia, has verified the presence of coccidii in eggs, a fact of great zoological and still greater etiological importance.

These parasites, long overlooked by pathologists, now claim their full attention. The coccidii are now known to occur more frequently than was supposed and to be connected with many pathologic processes, the causes of which were formerly obscure (molluscum contagiosum, etc.). Their presence in eggs is of the highest importance, as showing the avenue by which infection reaches man.

The white of boiled eggs often contains grayish or yellow-brown granules. Treated with alcohol these granules revealed under the microscope swarming colonies of coccidii in all stages of development, the living coccidium being found side by side with the free spore and the residuum of dead coccidii.

Professor Podwisotzky has not determined the species to which these coccidii belong, but he notes their marked resemblance to the coccidium oviform, a parasite ordinarily localized in the liver of rabits, and to the parasite named by him *karyophagus hominis*, localized in the acini of the human liver. He does not affirm these coccidii to be of frequent occurrence, but declares that epidemics of psorospermia occur among chickens, and that at such times eggs are infected with coccidii. —*Bost. Med. and Surg. Jour.*

Honor to Sir Joseph Lister. — As already stated, the new Polyclinic in Rome will have its two façades adorned with bas-reliefs in illustration of the modern genius of medicine: John Baptist Morgagni, representing pathological research, and Sir Joseph Lister surgical treatment. Designs for the bas-reliefs in question have been sent in by twenty-one competing sculptors, and are this week on view in the Scuola Vittorino da Feltre, in the Via della Polveriara. The number of designs is thirty-six, several artists having submitted more than one to the "Comitato Aggiudicatrice." The committee, which is composed of an equal representation of fine art and medicine, under the presidency of Dr. Guido Baccelli, has no easy task before it, as the competitors include the acknowledged masters of sculpture in Italy.—*Lancet.*

Gonorrhea.—Robert S. Anderson, M.D., Spennymoor, England, says: I have found your S. H. Kennedy's Extract of Pinus Canadensis of great use as an injection, in cases of gonorrhea.

Solutions of creolin, of the strength of ½ %, are now used for vesical, vaginal and rectal injections.

THE CANADA LANCET.

A Monthly Journal of Medical and Surgical Science Criticism and News.

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TORONTO, AUGUST, 1890.

The LANCET *has the largest circulation of any Medical Journal in Canada.*

THE CURABILITY OF PHTHISIS.

In our July issue we made some remarks showing the improbability of there being any scientific grounds for believing in the efficacy of the so-called hot air treatment of phthisis. As the weeks go by, evidence seems to be accumulating, which goes to prove that clinically, no better results are obtained from this mode of treatment than might be expected to follow when the plan of treatment depends upon conditions which contravene known physical laws.

A modification of the hot air method has been brought forward, also in Germany, by Krull, viz.: the warm moist inhalation treatment. The air should be from 96.6° to 98.6° F., and saturated with moisture. The inhalations are continued for as much as fifteen minutes daily.

The literature on this method is not nearly so extensive as it is on the other new methods, but a number of cases have been favorably reported on. Thus, Leubuscher brings forward 16 carefully observed cases treated by Krull's method. He states that in four patients in whom the disease was advanced, no improvement was apparent; in three there was almost "recovery"; and in nine more or less improvement. The patients expressed themselves as feeling better both during and after the inhalations, and in some cases, traces of blood disappeared from the sputum. No unfavorable symptoms manifested themselves. Krull's cases were benefited in about the same degree.

The object of the treatment is not in any way to act upon the bacillus, but simply to increase the power of resistance of the tissues. The theory is that, by the inhalations, the vessels which supply the lung tissue are dilated, and pulmonary nutrition is thereby increased. The portions of lung not yet invaded may be rendered more capable of resisting the encroachment of the bacillus, "while on the other hand, absorption may be promoted in the diseased area and cicatrization induced." The theory is very plausible as a theory, but more experience as to the utility of the plan will be necessary before the profession need build any hopes upon it.

The remedy upon which most reliance is now placed is creasote. It has stood the test of experience better than any other remedy or plan of treatment yet brought forward, and we believe that its positive value in the incipient disease is incontestable. Our own experience with the drug, while somewhat limited, has always been, that it produces beneficial effects, when the disease is not far advanced. Dr. Sommerbrodt and Prof Penzoldt are warm in their praise of the drug, and their experience with about 5000 patients during eleven years, has been that it "diminishes the cough, eases the expectoration, diminishes the secretion, and is most beneficial in the catarrhal stage."

In order that the best results may be obtained from the use of the drug, only the purest form of beechwood creasote should be used, the ordinary commercial article possessing, says Dr. Beverly Robinson, "neither the color, the odor, nor the chemical properties of the pure drug."

It is remarkable how the stomach in phthisis will bear the administration of three or four or five minims of properly diluted creasote, given three times a day, without any unpleasant effects. It is well given in muc. acaciæ and aq. cinnamomi. The emulsion formed is not unpleasant, and if properly prepared the separation is almost *nil.*

Lately there has been placed in the market a proprietary preparation called "Morrhuol Creasote," in capsules containing morrhuol grains iij, creasote grain j.

Morrhuol, the alleged active principle of cod liver oil, is held to be the type of those remedies which are used in consumption, for the purpose of inducing hyperalimentation. There can be no

doubt that many patients taking cod liver oil increase in weight, much more than by the actual amount of oil consumed. So that Prof. Germain Sée's statement that "cod liver oil is not only a nutritive, but owes its virtues to the active principle, which renders profitable and assimilable the carbo-hydrates and fats ingested," is unquestionably correct. If, now, "Morrhuol," be the principle upon which this assimilation of carbo-hydrates and fats *depends*, it should be very beneficial taken in connection with creasote, and we believe that it is worthy of a trial, at any rate in those cases where the stomach will not bear cod liver oil in any of its forms as now upon the market.

The surgical treatment of the disease will always be confined to one-sided cases. We cannot here enter upon the subject, but shall append the following by Prof. Tillmans, of Leipzig, *Br. Med. Jour.*, as showing what has been done and what may be done by the surgeon for the cure of the disease:

"I recommend that in similar severe cases of one-sided tuberculosis of the pleura and lung the same procedure should be adopted as I carried out in the case related, that is to say, the seat of disease should be exposed sufficiently for local surgical treatment by free resection of the chest wall in front or behind. In suitable cases the performance of a temporary resection of the chest wall may be recommended. A pedunculated flap of skin and bone is formed, and turned back, and afterwards when the disease of the pleura and lung is cured, the thoracic coverings are replaced in their original position. One can also proceed in such a manner that, after extensive resection of the ribs, the soft parts in the chest are divided in the direction of the lung, the flaps of soft tissues drawn apart with wound hooks, the pleura and lung subjected to adequate local treatment, and then the soft tissue flaps united to the pleura by compression. In my above related case I was obliged to remove the anterior part of the left chest wall *in toto*, as it also was extensively diseased."

In the case related there was a perfect cure, the man being after two years quite well and able to attend to his business as a merchant as before.

Dr. O. C. Edwards, of Ottawa, has been appointed Associate Coroner for the County of Carleton.

ONTARIO MEDICAL LIBRARY ASSOCIATION.

At the annual meeting of the Association the following officers were elected:—

President—Dr. J. E. Graham; *Vice-Presidents*—Drs. A. A. Macdonald, Temple, and Moore, of Brockville; *Treasurer*—Dr. McPhedran; *Secretary*—Dr. James McCallum; *Curator*—Dr. N. A. Powell; *Assistant Curator*—Dr. Wishart; *Trustees*—Drs. R. A. Pyne, Britton, and Pepler.

Dnring the year, the number of volumes in the Library has been doubled. The Association enters on its new year free from debt, and with assets of $5,545 Fifty-six Medical Journals are regularly on file. Arrangements have been made by which city physicians, or those residing at a distance, may take books from the library for a week at a time. Duplicate copies of various journals have come into the possession of the Association. These will be gladly exchanged with physicians who may wish to complete their sets.

Sulphonal.—Dr. H. M. Field, Professor of Therapeutics in Dartmouth College, read a paper before the American Medical Association, at Nashville, on Sulphonal, which he defines to be a mild calmative, a slowly but progressively acting hypnotic, having no other action, and its operation being attended by no complications, near or remote. It is thus the only pure hypnotic that we possess. We do not know how it acts, nor through what modification, wrought by the digestive process, it is made soluble, and so admitted into the blood; nor do we know in what chemical state, and through what avenue it leaves the body. It has no anodyne effect. A high state of pyrexia will often minimize or wholly defeat the hypnotic power of the drug; and failure sometimes arises from idiosyncrasy. It is not contra-indicated by any disease, and may be used for all ages. The period of therapeutic incubation is about two hours, and therefore the patient should not expect sleep before that time, but may attend to other duties in the meantime.

Commercially speaking, so many grains of sulphonal will buy so many hours of sleep. Dose for adult is 15 grs., repeated in two or three hours if necessary, and this may be decreased to 12, 10, or 8 grs. after a few days.

ACETANILIDE.—In the conclusion of an interesting paper by Dr. I. N. Love, in the *Jour. A. M. A.* he made the following statement regarding the safety and action of the above drug :—

1. Acetanilide, carefully guarded and properly used, is a safe and reliable remedy in diseases of infancy and childhood.

2. Whether used for the antipyretic, analgesic or sedative effect, it is preferable to antipyrin in that the result secured is of longer continuance and the depression is not so great.

3. The cyanosis which sometimes results from its liberal use is not uniform, and, while it is not an agreeable feature, my experience corroborates that of other observers to the affect that it soon passes off and is not accompanied by danger.

4. It is not desirable, in reducing temperature, no matter what means be employed, to use them in excess to the extent of securing sudden and great reduction. Especially is it preferable in using acetanilide for antipyretic purposes, to give it in medium doses to the extent of keeping the temperature down to a resonable point—in the neighborhood of 100° F. It is better to give small doses and repeat them more frequently, rather than large ones at long intervals.

5. It is of great value as a controller of temperature in the various fevers, whether they be caused by typhoid germ, malaria, or the exanthe mata.

6. It serves almost as a specific in whooping-cough, not in aborting the disease, as it has a definite course to run, but in mitigating the dis. comforts and controlling the paroxysms of the same.

7. Acetanilide, while of great value and surely safer than antipyrin, is no exception to the rule that obtains with all drugs. It should be handled carefully, administered judiciously, and under no circumstances should the public be educated in its use.

SUGAR IN URINE.—Dr. Caslu says that when urine contains sugar it may be detected by boiling a portion of the urine with an equal quantity of liq. potassæ to which is added a pinch of bismuth subnitrate, if sugar be present the powder changes to a brown or black.

PHENACETINE.—Geo. H. Pierce, M.D., *New England Medical Monthly*, in discussing the general actions of phenacetine, says it has a very wide range of action, being both an antipyretic and an analgesic in the highest degree ; on the one hand it will control the burning fever of a typhoid patient with its accompanying nervous conditions, and, on the other, relieve the pains pure and simple as they come to us in the form of neuralgias and the various rheumatisms. It is suitable to administer to children as well as adults, and is the safest, most agreeable and efficient antipyretic known to the medical science.

Given in about eight grain doses, it reduces fever, the reduction beginning in half to three-quarters of an hour, and by giving two grains every two or three hours the fever can be kept down. It is good when head symptoms are severe, also to reduce general pain of any kind.

Being insoluble, it should be given with a little sugar in powder form.

PRIVATE HOSPITAL.—We are pleased to record the marked success of Dr. Temple's private hospital for the diseases of women. So great has been the success of this institution during the past year, that new premises have become necessary, and t provide the increased accommodation demanded, Dr. Temple has secured the desirable situation on the corner of Bellevue Ave. and Oxford Sts., where he intends remodelling the spacious buildings at present occupying this site and of making additions at considerable expense, which will afford an increased accommodation for ten additional wards, which, with the previous accommodation supplied, will constitute it one of the largest private hospitals in Canada. Every attention is being paid to sanitary details, and under the efficient management of Dr. Temple and his staff, very excellent results may be looked for. We congratulate the Dr. upon the enterprise he has displayed and w his undertaking every success.

TONSILLITIS.—The following is highly recommended :

℞—Tr. guaic ammoniæ.
Tr. Cinchonæ co. . . aa. fl. ʒiv.
Potassæ chlorat. . . . . ʒij.
Mel. desp. . . . . ʒiv.
Pulv. acaciæ. . . . . q.s.
Aquæ q.s. ad. . . . . fl. ℥iv—M.

Sig.—ʒj every two hours, used as a gargle.

Treatment of Bright's Disease.—Senator advises the patient to live in a dry and equable climate, and almost exclusively upon milk as a diet. No red meats are allowed, and white ones only in strict moderation. Fruits, herbs and cereals may be taken, but spices are interdicted. Dilute wines are allowed in small quantities.

Bumberger's treatment is an exclusive milk diet, with the following iron pills (*L'Abeille Méd.—Med. News*):

℞—Chloride of iron, ... gr. iij.
Ext. taraxacum, q.s.—M.
Sig.—One pill three times a day.

Or,

℞—Sulphate of iron, }
Bicarb. sodium, } of each 75 grains.—M.
Ext. taraxacum, }

Make into sixty pills, of which three should be taken in the morning and three at night.

Semmola also insists on a diet of milk, and gives the following mixture:

℞—Iodide of potassium, . . . gr. xv.
Phosphate of sodium, . . gr. xxx.
Chloride of sodium, . . . ʒ j.
Aqua, ... ℥ iij.—M.
Sig.—To be taken in twenty-four hours.

D. Connor, M. D., Simsonville, Ky., says: I have used Celerina in my practice with very satisfactory results in nervous debility, and with good results in nervous headache, nervous prostration and sleeplessness, giving tone as well as quiet to the nervous system. I regard it as a splendid nerve tonic, I have used it in spermatorrhea with good results, and in a case of insanity it quieted the mental excitement and promoted sleep, and, as it is free from toxic effect, it can be used in doses to have the desired effect without any danger, which is more than can be said of some other medicines that are used as nerve tonics and sleep producing agents. I can conscientiously recommend it as a valuable nerve tonic in all cases of nervous prostration.

Why do some business managers of Medical Journals *roll* their copies when preparing them for the post. There is perhaps nothing more aggravating than the struggle to get at the contents of a small-sized, thick journal that has been rolled when more or less damp, from the press and bindery and then dried during its journey, so that it is *set*, as though it had been cut by a bandsaw. If the aggregate of profanity caused by such *low rolling* could be made objective, and the number of times the man responsible is anathematized, could be known to him, we apprehend an improvement would speedily take place in this matter.

Proposed Medical Society.—We notice with pleasure, that the medical men of Northern Ontario purpose forming a Society. To this end an inaugural meeting will be held at Huntsville, August 6th, when papers will be read by Drs. Ryerson of Toronto, Bridgland of Bracebridge, Byers, Godolphin, and others. Drs. Howland and Hart are taking an active part in the movement, which should meet with a success which we hope may be commensurate with the most sanguine hopes of the promoters of the Society.

Books and Pamphlets.

An Interesting Work.—Dr. Canniff sends us the prospectus of his work on "The Medical Profession in Upper Canada, 1783-1850." The volume will contain about 600 pages, divided into three parts, as follows:—

First Part—The Pioneer Medical Men, and the several steps taken to establish the profession on a legal basis. Second Part—The proceedings of the Upper Canada Medical Board from its organization, 1819 to 1850; and of the College of Physicians and Surgeons of Upper Canada, 1839-41, with references to historical events showing the growth and development of the profession. Third Part—Biographical sketches of early physicians of the Province, with many references to early events in the history of Upper Canada. An appendix—containing many historical documents. Biographical sketches of, and reference to the lives of about 600 other doctors engaged in practice previous to 1850.

Dr. Canniff has had a good deal of experience in collecting historical matter, as is evidenced by his work published some years ago on "The Settlement of Upper Canada," which was so well received, and there is no doubt he has provided for this work valuable facts, which each member of the profession should be in possession of. The publishers are Williamson & Co., Toronto, and the work will not be issued until a sufficient number of subscribers are had to cover the cost of publication. We are sure there should be no lack of names for that purpose, and wish the Dr. every success in this work which is, so far as he is concerned, purely a labor of love, and not for financial gain.

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